

**U.S. ARMY-BAYLOR UNIVERSITY**

**A STUDY TO DEVELOP ALTERNATIVE APPROACHES  
FOR IMPLEMENTING PRODUCT LINE MANAGEMENT  
IN THE SOUTH TEXAS VETERANS HEALTH CARE SYSTEM**

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## **LIST OF ABBREVIATIONS**

ABC	Activity-based costing
ACOS	Associate Chief of Staff
ACOS/Ed	Associate Chief of Staff for Education
ACOS/Ext Care	Associate Chief of Staff for Extended Care
ACOS/LTC	Associate Chief of Staff for Long Term Care
ADHC	Adult Day Health Care Program
Admin	Administrative
Admin svc asst chief	Administrative service assistant chief
ALOS	Average length of stay
A&MM	Acquisition and Material Management Service
Assoc Director	Associate Director
BDOC	Bed days of care
BMTU	Bone Marrow Transplant Unit
CBOC	Community-based outpatient clinics
CDA	Certified dental assistant
CDT	Certified dental technician
CEO	Chief Executive Officer

CHAMPVA	Civilian Health and Medical Program of the Veterans Administration
Clin Nurse Spec	Clinical Nurse Specialist
Clin svc	Clinical service
Clin svc asst chief	Clinical service assistant chief
Clin svc supv	Clinical service supervisor
CMO	Chief Medical Officer
CMOP	Consolidated mail-out pharmacy program
CVA	Cardiovascular accident
CWT/TR	Compensated work therapy treatment program
DoD	Department of Defense
DRG	Diagnosis-related group
DSS	Decision support system
Educ	Education
EEO	Equal Employment Opportunity
ELC	Executive Leadership Council
EMS	Environmental Management Service
Ext Care	Extended Care Service
FACP	Fellow in the American College of Physicians
GEM	Geriatrics Evaluation Medicine Clinic
GME	Graduate medical education
GRECC	Geriatrics Research, Education, Clinical Center



GS	General Schedule
HBHC	Home-based health care
HBPC	Home-based primary care
HCA	Health care administration
HMO	Health maintenance organization
HRM	Human Resource Management Service
ICD-9-CM Codes	International Classification of Diseases-9th Revision-Clinical Modification Codes
Inform	Information
IRM	Information Resource Management Service
KT	Kinesiotherapist
LPN	Licensed Practical Nurse
LTC	Long Term Care Service
MAS	Medical Administration Service
MBA	Master's in business administration
MCCR	Medical Care Cost Recovery
MH&BSS	Mental Health and Behavioral Sciences Service
MRI	Magnetic resonance imaging
M.D.	Medical doctor
Med	medical
Med Dir	Medical Director
Mgr	Manager

Mgt	Management
NA	Nursing Assistant
OR	Operating Room
Org	Organization
PACT	Post-amputation clinical treatment program
Path & Lab	Pathology and Laboratory Service
PCS	Office of Patient Care Services
Perf Plan	Performance plan
PHA	Public health administration
PhD	Doctorate
PIC	Process improvement council
PL	Product line
PLM	Product line management
PM&R	Physical Medicine and Rehabilitation Medicine Service
PPO	Preferred provider organization
PTSD	Post-traumatic stress disorder
RBRVS	Resource based relative value scale
RD	Registered dietician
RDH	Registered dental hygienist
Rehab	Rehabilitation Service
RN	Registered nurse
RT	Recreation Therapist

RVU	Relative value unit
SBU	Strategic business unit
SCIC	Spinal Cord Injury Center
SCIS	Spinal Cord Injury Service
SHG	Strategic Healthcare Group
SPSS	SPSS for Windows (“Real Stats Real Easy”)
STVHCS	South Texas Veterans Health Care System
SUPT	(Acronym not defined or clarified by the survey participant)
Svc	Service
TBI	Traumatic brain injury
UM	Utilization management
VAMC	Veterans Administration Medical Center
VHA	Veterans Health Administration
VISN	Veterans Integrated Service Network
VSO	Veterans Service Organization

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## **ABSTRACT**

The changing health care industry has affected the Veterans Health Administration (VHA). It has reorganized into a decentralized, multi-service, integrated, managed health care system (Kizer 22 January 1996, 1). One strategy to reduce costs was to implement nation-wide multidisciplinary clinical care service lines<sup>1</sup> (Kizer March 1996, 15-16). The purpose of this study was to develop alternative approaches for implementing product line management in the South Texas Veterans Health Care System (STVHCS).

Of 132 Veterans Administration Medical Centers (VAMCs) surveyed, only forty have implemented product line management. The survey provided information about strategic planning, benefits, problems, product line manager selection/roles/responsibilities, and other demographics. Fifty percent of the VAMCs have less than six month's product line experience. Survey results were consistent with private sector facilities described in the literature. Thirteen STVHCS key management personnel were interviewed. They shared their perceptions about implementing product line management in the STVHCS. There were mixed opinions about how to reorganize services along product lines, and whether such a management approach is the best strategy for the STVHCS.

Based upon a comparison of the survey and interview results with product line management approaches described in the literature, three alternative approaches for the STVHCS were developed: traditional; service-oriented and traditional combined; and service-oriented, traditional, and integrated combined. Of the three, a "best fit" approach was recommended.

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<sup>1</sup>The terms product line management, service line management, and strategic health care groups are synonymous. For purposes of this paper, product line management will be used.

# **CHAPTER I**

## **INTRODUCTION**

### **Conditions Which Prompted the Study**

The health care reform initiative of the early 1990s has resulted in a dynamic transformation of the health care industry. The health care industry and the methods of delivering care have been greatly affected by managed care. The capitated environment is highly competitive and changing rapidly (Dee-Kelly, Heller and Sibley 1994, 471). Unnecessary and marginal care have been reduced or eliminated (Povar and Moreno 1988, 20). Capitation has resulted in administrators and health care providers reengineering processes within the organizations (Macko 1996, 39).

Most health care administrators consider managed care to be the most effective method to reduce costs, while increasing the access to care and improving the quality of care to patients. Health care administrators continue to struggle with the same problems identified in the 1960s: the need to reduce the cost, improve the quality, and increase the patient's access to health care (Fuchs 1964). Escalating health care costs have forced administrators to assess patient needs to determine the most beneficial health care product lines (Shortell 1995, 2). They are restructuring organizations to become more efficient, reduce health care costs, improve the quality of care and



access to care, and ultimately survive in the managed care environment (Navarro 1995, 195).

The VHA is now experiencing the same transformation.

In late 1995, Dr. Kenneth Kizer, The Under Secretary for Health, formally initiated the reorganization of the VHA into a decentralized, multi-service, integrated, managed health care system. It began with the reorganization of the VHA Central Office and the creation of twenty-two Veterans Integrated Service Networks (VISNs) (Kizer 22 January 1996). The VHA is projected to be fully capitated by 1998, with each VHA serving an enrolled population (Coronado 1996). The 1995 agreement with the Department of Defense, allowing the VHA to treat active duty military family members and retirees through a Tri-Care preferred provider option (PPO), places the VHA in direct competition with other managed care organizations (Nelson 1995, 16).

In his "Prescription for Change," Dr. Kizer identified the implementation of multidisciplinary service-line clinical care services as one action that would be taken to reduce costs. Thereafter, the VHA Central Office reorganized its Office of Patient Care Services along service lines and established ten strategic health care groups (Kizer March, 1996). (Refer to APPENDIX A, VHA Strategic Health Care Groups.) VISN and hospital Directors must now lead VHA hospitals in implementing product line management to reduce costs and increase marketability. To date, however, only a very few of the larger VHA hospitals have restructured operations along product lines. Even though product lines have been identified within the STVHCS, it has not yet reorganized along them.

### **Statement of the Problem**

Implementation of product line management within the private sector began in the mid-1980s, and is well-documented in the literature. The VHA hospitals certainly could model some

of the successful strategic approaches utilized by these organizations. However, the long-standing perceived and perhaps actual traditional bureaucratic management style of the VHA leadership and its organizational structure may not preclude using all strategies utilized in the private sector.

Knowledge of reorganizational approaches utilized by management in those VHA hospitals organized along product lines may offer more viable options to other VHA hospitals. Knowing and understanding the identified barriers and strengths of product line management in the private sector and in the few VHA hospitals with product line management could assist the STVHCS management in developing a successful product line management reorganization process.

### **Literature Review**

#### **Definition of Product Line Management**

The business concept of product line management was first introduced in 1928, by Procter and Gamble when a product manager was asked to produce a high quality product, Lava soap, at a low cost (Campbell 1990, 1). When the diagnosis related group (DRG) prospective payment system was implemented in 1982, it affected reimbursement to hospitals for health care provided to Medicare patients. With shorter lengths of stay, hospitals quickly experienced rapidly falling revenues. Facing competition throughout the health care industry, executives borrowed the successful business principles and techniques of product line management to reduce costs and still provide a quality product (France and Grover 1992, 31). Health care executives, however, are cautioned not to consider product line management as the panacea for all problems affecting

revenues and health care management (Manning 1987, 29).

For one to understand what product line management is and how it has been applied to health care organizations, it is necessary to define the common terminology used in discussions of product line management. In the business world, a product is a physical good, person, place, service, organization, or idea that is offered to consumers for purchase, attention, or consumption to fill a want or need (Kotler 1994, 432). These products are tangible and perishable, and the quality varies from one time to another. They can be inspected or evaluated by the customer before the purchase is made (France and Grover 1992, 32).

A health care product, on the other hand, is the most intangible of all services. It is any service provided by a health care provider to a patient (customer). A health care product cannot be evaluated before purchase. The difference between what the patient expects and what he receives may be great. Demand for a health care product is very unpredictable, making it more risky than a business product. A health care product often includes several elements, such as services, medications, medical equipment, and food (France and Grover 1992, 31-32). Since the health care product is a service, the word "service" is frequently used in place of product, i.e., health care service, service line, and service line management (Bruhn and Howes 1986, 18)

A product line consists of a group of related products or services the patient may purchase. For example, oncology may be considered a product line offering several services, such as chemotherapy, bone marrow transplantation, radiation therapy, pain management, and psychological counseling (France and Grover 1992, 35). Selected product lines are congruent with the organization's mission. The organization's planning, resource allocation, budgeting, management, and control systems are similarly aligned with its product lines (Manning 1987, 28).

The product mix includes the number of product lines an organization offers (width), how many products are offered in a product line (length), and the available alternative products to meet the same need (depth) (France and Grover 1992, 35). Health care product line management, therefore, is “the organizational structure, management control systems, and delivery strategies for health care services structured around case types or major clinical services” (Nackel and Kues 1986, 109). Flynn (1991, 22) defines product line management as “redesigning the organizational structure so that products (or services) can be coordinated and managed as separate business entities....for better cost control.” The organization may have specific oncologic, orthopedic, pediatric, psychiatric, or obstetrics product lines, or it may elect to have generic ambulatory care, acute care, long term care, rehabilitative care, and preventive health care product lines.

Product line management links the delivery of quality clinical services with marketing and sales programs. It is considered to be a transitional model for organizations moving from inpatient to outpatient services, from a cost-based to a prospective payment system, and from an industrial to a socio-technological model. It articulates with health care outcomes expected by organizations, physicians, and patients. O'Malley, Cummings, and Serpico (1991, 9-10) have identified the following attributes as comprising successful product lines:

- \* Being identifiable to the market;
- \* Having an identifiable market;
- \* Contributing significantly to hospital long-range planning and daily operations;
- \* Having unique or dedicated production facilities, staff, and technology;
- \* Being recognized as a unique or special program;
- \* Being an administratively manageable unit;
- \* Having linkage to treatment patterns of medical staff; and
- \* Paralleling the organization of the medical staff.

## **Management Approaches to Product Line Management**

The approach management chooses can be viewed from two perspectives. The first is the organization's strategic orientation, including the goals and objectives that reflect it. The second perspective is the product line management decentralization approach chosen by the organization.

### **Strategic Orientations**

There are three distinct strategic orientations: planning and marketing, budget and control, and service delivery. They may occur singly or in combination, depending upon the identified organizational strategic goals and objectives to be met. Why is product line management being considered as an organizational approach? Management must first identify the scope of services to be provided, the population to be served, and whether the emphasis will be on financial management, quality and/or cost of service-delivery, or on marketing some or all of the organization's services. Until the strategic orientation(s) is identified, the organization cannot decide the approach that will best meet its goals (Charns and Tewksbury 1993, 135, 138).

The organization that focuses on services to meet the needs in a defined population typically functions under planning and marketing strategies. Each product line has a business plan and conducts planning and market research and sales promotion activities. The ultimate goal is to increase revenues in the product line. If the organization's goal is to determine the costs of providing specific types of care and to compare these costs with revenues, the budget and control strategic orientation is the primary focus. If the organization focuses on the effectiveness and delivery of care, it functions under the service-delivery orientation. Medical practice is monitored and modified. Frequently, organizations function under all three orientations. Budget and control enhances the management of service-delivery by focusing on effectiveness and efficiency.

Planning and marketing enhances the quality and consumer convenience of care in the service-delivery orientation (Charns and Tewksbury 1993, 136-138).

### *Approaches to Decentralization*

Product line management is considered to be a strategy of decentralization based upon the organization's mission and goals. Decentralization affects the organization's infrastructure. The organization's culture and management style influence the approach adopted by each facility (Zelman and Parham 1990, 29). Product line management may or may not include organizational integration where the product line manager performs the role of integrative manager (Charns and Tewksbury 1993, 124).

There are four approaches to decentralization: traditionalist, czarist, market-oriented, and service-oriented. In the traditionalist approach, each department, such as nursing or pharmacy, is responsible for its performance in all product lines, i.e., pediatrics, orthopedics, or oncology, where the physician is the case manager. The functional departments remain intact, which is advantageous to the traditionally managed organization that resists change. The disadvantage is a lack of control by the product line over departments. As a result, the product line is not able to respond quickly to environmental changes (Zelman and Parham 1990, 33).

The czarist approach, almost a complete opposite to the traditionalist approach, gives full control to each product line manager for all operations in the product line (Zelman and Parham 1990, 33). In essence, each product line becomes a strategic business unit (SBU) within the organization. The product line can respond quickly to the environment (Manning 1987, 23). This arrangement may be risky if the goals of the product line are not congruent with the organization's goals. It can also lead to discontent among the organization's employees if they

begin to compete with one another to perform duplicate services (Zelman and Parham 1990, 33).

The market-oriented and service-oriented approaches are dependent upon horizontal and vertical coordination in a matrix type management structure. They differ only in their emphasis. The market-oriented product line seeks services, and the service-oriented product line is a service looking for a market. These two approaches seem to best fit organizations structured under a triadic management system<sup>2</sup> (Zelman and Parham 1990, 33).

Charns (1996) has identified three organizational integration approaches. The first two are based upon team structures. In both, product line teams cutting across services and facilities may be implemented. This requires product line team members to be accountable to traditional service management. This approach could be compared to one, or a combination, of Zelman and Parham's traditionalist, service-oriented, and market-oriented approaches. Charns' second team approach gives product lines control over resources and the quality of, and access to, care (Charns 1996). This approach could be easily compared to Zelman and Parham's czarist approach. Charns' third approach is applicable to large, multi-hospital, integrated systems. It eliminates all of a facility's strategic management functions and replaces them with "system" product lines managed by "system" product line directors (Charns 1996).

### **Developing Product Lines**

Three areas must be considered when developing product lines: the organization's infrastructure, strategic planning and implementation, and physicians (Manning 1987, 29). The

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<sup>2</sup>A triadic management system refers to the Chief Executive Officer and two associates, one responsible for clinical operations, and one responsible for administrative operations. In the VHA system, the triad consists of the Director, Associate Director or Chief of Operations (administrative operations), and the Chief of Staff (clinical operations).

specific components, which exist in every health care organization, that should be considered when designing the product line management process include: the skills and attitudes of employees, physicians, and board members; decision support information and control systems; the existing organizational structure; and the “fit” of product line management operational systems with the culture and management style of the organization (Patterson and Thompson 1987, 70).

### Infrastructure

Designating a product line manager and outlining the person’s specific responsibilities and roles are essential to successful product line management. Nackel and Kues (1986, 112) describe the responsibilities as:

planning and delivery of assigned product lines, defining product line costs, and determining product-line profitability by type of service, payor and physician. Product line managers assist hospital executives in marketing efforts, including market research, advertising and negotiation with third-party payors within their specified product lines.....they monitor and control the consumption of hospital resources within their product lines.

They state that these responsibilities are most appropriate for operations personnel, but because product lines are focused on delivery of services by physicians, physicians should be involved, possibly serving as product line managers (Nackel and Kues 1986, 113). The product line manager must have professional knowledge, management skills, excellent interpersonal skills, and good social standing (Zelman and McLaughlin 1990, 14).

Many product line managers have managerial skills, but lack the leadership skills for long-range planning and operations. Longshore differentiated between the product line manager’s managerial and leadership skills by grouping them into five categories, as follows:



Table 1.--Differences Between Leaders and Managers by Category (Longshore 1994, 16, adapted from Making a Leadership Change, by Thomas North Gilmore, 1988).

CATEGORY	LEADERS	MANAGERS
1. Necessary Characteristics	Imagination; ability to communicate; creativity; readiness to take risks; willingness to use power to influence the thoughts of others	Persistence; tough mindedness; intelligence; analytical ability; tolerance, good will
2. Attitudes Toward Goals	Have personal, active goals; shape ideas; seek to change the way people think about what is desirable, possible or necessary	Have personal goals that arise from organizational necessities; respond to ideas
3. Conceptions of Work	Create excitement; develop fresh approaches to long-standing problems; open up issues; project ideas into images that excite people and only then develop choices that give the projected images substance	Formulate strategies; make decisions, manage conflict; negotiate, bargain, compromise, balance; limit choices
4. Relations With Others	Intuitive, empathetic, intense; concerned with what events and decisions mean to people	Prefer working with others, with a low level of emotional involvement in these relationships; role oriented; concerned with how to get things done
5. Sense of Self	Feel separate; work in organizations, but never belong; inward	Joiners, sense of belonging

Longshore states that health care product line managers have not been given the equivalent responsibilities and authority as their counterparts in the manufacturing industry. He believes they should have full fiscal and operational responsibility for their product lines. This difference usually results from top management's poor selection of the individual to fill the role. According to Longshore, rather than promoting from among the organization's committed and

loyal clinical or administrative staff, management must seek product line managers with a background in finance, marketing, strategic planning, and business administration. He indicates that a clinical background is not necessary (Longshore 1994, 15).

Usually, one product line manager manages a product line, thereby flattening the organization and giving fewer managers more latitude to make decisions. However, when a product line becomes too complex for one person to effectively and efficiently manage, the chief executive officer (CEO) may split the responsibilities. One of the managers would focus on the strategic planning and marketing, while the other manager would supervise the daily operations of the product line (Longshore 1994, 16).

One author suggests the case management role performed by nurses, from the early 1900s through the 1970s, has evolved into a case management product line, where coordination of patient care from acute care through the continuum to home health care occurs. Prospective, concurrent, and retrospective utilization review processes are considered throughout the patient's continuum of care by the nurse case manager, resulting in increased cost-effectiveness of the product lines and timely flow of care delivery (Pierog 1991, 17-18).

A second element deserving consideration in the organization's infrastructure is its control and information systems (Manning 1987, 29). Automated decision support, or strategic information, systems are required to provide a database incorporating cost accounting, quality measurement systems, case mix management data, and marketing management data into the product line database. From the product line database, the financial, market, and clinical performance of the product line is made available for managerial review and consideration in strategic decision-making processes to modify operational systems (Simpson and Clayton 1991,

33-36). The development of information systems should be a corporate responsibility, rather than a product line responsibility. Personnel involved with control system activities, such as finance and personnel, should work closely with product line managers, but should answer to the CEO (Nackel and Kues 1986, 113).

Another infrastructure factor affecting the development of a product line management strategy is the behavior of the purchaser of health care services for the particular organization. In the traditional fee-for-service reimbursement system, the organization focuses on offering a wide range of services to attract patients, potential patients, and referrals. The indemnity insurers and employer-based insurers seek care through many providers in a noncontractual arrangement. Thus, the product line management organization chooses to offer specialized services to patients, potential patients, and referral sources. Organizations having contracts with managed care purchasers, such as health maintenance organizations (HMOs) and preferred provider organizations (PPOs), focus on emphasizing continuity of care (HMO) and decentralizing authority (PPO). They extend their marketing strategies to employers, third party payors, and enrollees (Zelman and McLaughlin 1990, 9-11).

#### *Strategic Planning and Implementation*

The second area to be considered when developing product lines is strategic planning and implementation. It is important that specific and realistic action plans with time lines are developed so management and staff can begin thinking about business from a different perspective (Manning 1987, 29). Philip Lathrop (1996, 54-55) outlined a seven-step strategic planning framework successfully utilized by many industries, which could serve as a guide for developing and implementing product lines:

1. Begin with the basics: define the mission and vision of the organization, the basic direction and purpose of the organization;
2. Decide what to do and when to do it: develop, test, and evaluate strategies for product line management implementation;
3. Tackle the deployment of key assets: determine those programs necessary for the population to be served, and decide how to divert capital from facilities to technology and infrastructure;
4. Scrutinize clinical services for duplication and waste;
5. Assess infrastructure services: decide which functions should be centralized and decentralized, such as financial functions, plan design, and human resource functions; determine if product lines will be the rationale for organizational redesign; develop an organizational structure and outline responsibilities of the organization and the product line; determine who will be empowered; develop product lines based upon a thorough analysis of patient needs and cost analysis;
6. Set the final ground rules: develop policies, practice guidelines and protocols for care in each product line; and
7. Examine every feature of every unit's operation: ensure each product line's role and performance supports the organization's overall strategic objectives.

Creativity, communication, and education are essential to planning and implementing product line management. A lack of strategic planning results in chaos in the organization, increased overhead, internal competition among product lines, unresponsiveness to potential product lines, physician resistance, and an emphasis on short-term profits rather than long term growth (Lowe 1987, 10-11). Resistance and difficulties in implementing such a change must be anticipated, and strategies to deal with the resistance should be thoroughly explored (Zelman and McLaughlin 1990, 14).

Strategic steps should be taken in planning and implementation. Commitment to product line management by top management is crucial to its success. The product line management philosophy should be thoroughly understood in order to determine if it will help the organization succeed in today's managed care environment. The first, and perhaps most time-consuming step, is for management to think "outside the box." Managerial personnel should brainstorm alternative

organizational structures and roles from both functional and product line perspectives before making final decisions (Nackel and Kues 1986, 121).

The second step is to identify the product lines. Selected product lines should be easily identifiable within and outside the organization. They should be based on the clinical delivery structure of the organization. The organization's span of control should be no more than eight to ten product lines (Nackel and Kues 1986, 113, 121). Merging or eliminating services and negotiating contracts for care may be necessary (Zelman and McLaughlin 1990, 14).

A technique called portfolio analysis, which refers to product lines as strategic business units (SBUs), is used in product line planning. Utilizing existing product data and data from potential product lines relative to revenues and expenditures, productivity, efficiency, quality performance, customer satisfaction, market potential, and the external environment, management prepares a portfolio analysis. This information, when used to determine potentially profitable product lines, reduces the financial risk to the organization. The product lines may then assist the hospital in developing "centers of excellence" to attract patients and provider groups (MacStravic 1986, 36-38).

The third step is to define the roles and responsibilities of the organization and product line manager. Thereafter, the product line manager should be selected and trained. A business plan, complete with an assessment of information systems, should be developed. Education of the staff and administration about product line management and the manager's role is crucial to their acceptance of the change (Zelman and McLaughlin 1990, 14). The new organizational structure should be communicated from the top through middle-management levels for the purpose of converting the managers to product line management philosophy, including accountability,

budgeting, and planning (Nackel and Kues 1986, 121).

The final step, implementation, should begin with a pilot project, whereby managerial personnel experiment with one or two product lines. This allows time for refining reporting systems, and for staff to become comfortable with the organizational power structure and interdisciplinary working relationships. Organization-wide implementation should begin after resolving problems identified in the experimental product lines (Zelman and McLaughlin 1990, 14). A reassessment of the product line management organizational structure, the roles and responsibilities of product line managers, reporting relationships, and the congruency of product lines with the organization's mission should be conducted at frequent, predetermined intervals (Nackel and Kues 1986, 121).

#### *Physician Considerations*

In the manufacturing industry, unsatisfactory performance by a product distributor can be controlled by the product line manager threatening to terminate the business arrangement or decrease the business activity. Health care organizations, on the other hand, have had no control over affiliated physicians who control the distribution of patients (Manning 1987, 32).

Recruiting and retaining efficient and effective physicians to meet the patients' needs are important to the success of product line management and to the organization (MacStravic 1986, 38). In 1989, two researchers in Hartford, Connecticut, conducted a marketing research study to determine patient needs and wants in a maternity care unit. Utilizing a convenience sample of 1,350 patients to complete a questionnaire, researchers determined that 80% of the patients rated the choice of physicians as the driving factor in their decision to choose a particular hospital (Bowie and Kivney 1993, 57). Continued physician satisfaction with, and success in, an

organization are crucial to attracting patients to the organization (MacStravic 1986, 39).

When planning the product line management process, one must consider the physician distribution system and develop information systems (billing, patient scheduling, referrals, medical records with office records, and so on) which "tie" the physician to the organization's operational system. Contracting with HMOs, PPOs, and physician group practices has increased the control organizations have over physicians' activities related to fraud and abuse. The medical staff bylaws should reflect product line management requirements (Manning 1987, 32).

Physicians frequently view the organization's restructuring for product line management as disorganized and frustrating. They become sensitive to the loss of autonomy and authority brought about by reporting to a non-physician product line manager. To avoid physicians' negative perceptions of product line management, many hospital executives permit them to report directly to the managers and top administrators. However, such action does not promote "downsizing" and "streamlining" the organization; nor does it solve or promote interpersonal relationships within the product lines.

Once management makes the decision to implement product line management, it would be more beneficial to establish solid lines of authority from the outset, with physicians who are not designated as product line managers reporting only to the product line manager, whether that manager is a physician or not. This should be followed up with intense communication with physicians, involving them in post-strategic planning meetings and in steering committees involving other physicians and administrators. It is important to physicians and administrators that the medical staff have a voice and meaningful input into the product line management development and implementation processes. Through such actions, physicians are provided the

opportunity to maintain their autonomy (Longshore 1994, 18-19).

In 1993, Langabeer (1996, 1244-1246) conducted a study of 100 major, urban, non-federal, teaching hospitals' economic strategies by evaluating the relationship between each hospital's operations and cost per discharge. This study was done in response to the need to reduce costs in the managed care environment while retaining qualified providers as faculty in graduate medical education programs and as clinicians in the hospitals. He found that four factors significantly lowered health care costs in teaching facilities by improving the efficiency with which services were delivered. The factors included the following: decreased number of beds, increased number of discharges, increased investment of capital to renovate and upgrade older facilities from an inpatient to outpatient environment, and decreased number of employees. Langabeer also stated that teaching facilities must begin using strategies for improving efficiency, such as activity-based costing, service-line management, clinical pathways, and process mapping.

### **Evaluating the Effectiveness of Product Lines**

Product line effectiveness is measured through a financial analysis of revenue and expense reports, including comparative analyses with competitive hospitals or those of similar size and complexity (Sands and Garabedian 1991, 47-48). Other measurement tools include patient satisfaction surveys and an analysis of patient waiting times, procedural volume changes, and physician referrals (Jones 1993, 26). Comparing these elements, pre- and post-product line management implementation, and analyzing the identified outliers frequently results in systems changes by providers and management. Over time, cost savings can be realized (Sands and Garabedian 1991, 47-48).



Since one of the primary objectives of organizations adopting product line management is to reduce and control costs, creating a method to evaluate costs is extremely important. This can be accomplished by estimating product line costs using a standard cost approach. It is crucial that reliable and fast information databases are available to the organization. Management must first determine standard costs for each identified product line (Cooper and Suver 1988, 60).

In collaboration with physicians, nurses, and other providers, the direct costs of providing care to a patient with a diagnosis (e.g. stomach disorder) treated in the product line are identified. These direct costs may include operating room, radiology, laboratory and medical procedures, prescriptions, and inpatient days of care. Each product line could receive a pro rata share of the organization's total indirect costs, i.e. administration, accounting, housekeeping, and security costs (Cooper and Suver 1988, 64). Other methods of allocating indirect costs are: the step-down approach; or assigning costs based on the percentage of total inpatient volume, adjusting total inpatient volume to reflect DRG cost weights, and assigning costs (McCormick 1991, 100). The sum of direct and indirect costs for each product line would become its standard cost, which could be compared to actual costs of the product line on an ongoing basis (Cooper and Suver 1988, 69).

A thorough review of high or low cost outliers by the product line manager and staff could result in modification of a provider's practice behavior, and in decisions by management to increase, decrease, or eliminate selected product line services (Cooper and Suver 1988, 69). Cost-benefit analyses of services impacting the indirect costs could be conducted to identify potential advantages of changing delivery approaches in each product line (McCormick 1991, 100).

Trends in the product lines' number and percentage of total inpatient cases are also useful in measuring each product line's performance. Management can determine those with a consistent growth trend. An assessment of the reasons for fluctuations can be correlated to new programs or other strategic initiatives or influences from the external environment. At least three years of data are needed to support decision making unless dramatic changes warrant immediate changes. Comparing trends with those of hospitals of similar size and complexity, competing hospitals, or a service-area, regional, or national standard would broaden the scope of the analysis (Studnicki 1991, 70-71).

Perhaps one of the most accurate cost measurement tools, but also one of the most time-consuming and expensive, is the activity-based costing method (ABC). It eliminates the traditional cost centers and remaps all activities (costs) in the organization to the underlying product or service rendered. ABC uses the Resource Based Relative Value Scale (RBRVS) values for procedures, Relative Value Units (RVUs) for laboratory procedures, and DRG weights for inpatient stays. Therefore, variable costs fluctuate with service volume only. Fixed costs are allocated only to those products or services that use the equipment substantially. With today's computer technology, unit-costing spreadsheets easily provide the necessary information to hospital executives for making sound decisions about changing product line mixes (Holmes, 1996, 13-14).

### **Intended Benefits of Product Line Management**

One of the advantages of product line management is the creative tension such a corporate philosophy sets up between top administrators and general managers. General managers will

force the CEO to reduce administrative costs if they believe a high overhead prevents the managers from making a profit on a given service (Fackelmann 1985, 70). The elimination of duplication of services and minimization of waste are two other potential benefits (Goodrich and Hastings 1985, 157). The organization structured around product lines can create an entrepreneurial culture (Ruffner 1986, 12; Manning 1987, 26). Lowe (1987, 9-10) and Studnicki (1991, 68-69) cite other potential benefits of the product line management approach, including the following:

- \* There is greater commitment and accountability for operations by the product line manager when responsible for only one product line;
- \* The product line manager has a thorough understanding of the market influences, decision makers and values of the delivered service;
- \* Product line management facilitates coordination of systems among various departments and functions;
- \* There is a quicker response to the market changes through planning and implementation;
- \* Each product line has defined goals and communicates its benefits to the market;
- \* The relationship between strategic planning and the operating and capital budgets is enhanced by allocation of resources to product lines with the highest profit margins;
- \* Product lines are developed, based on demand rather than supply, forcing an evaluation of new and existing programs; and
- \* A product line management approach permits smaller hospitals to compete with larger hospitals.

### **Limitations of Product Line Management**

The most profound limitation of product line management is the lack of consensus between the definition of health care product lines cited in the literature and the manner product lines are applied in practice. The terminology used to refer to "product line management" and "service line management," as well as to innovative organizational forms such as "matrix organizations," is inconsistently applied in practice, making it difficult to compare various types of

organizational approaches (Charns 1993, 124). Even within an integrated multihospital system, the definition of product line management may vary from one facility to another, depending upon the reasons for implementing product lines and the culture and management style in the different facilities.

The need for functional management is not necessarily eliminated in product line management. Product line management can be superimposed on functional management, creating additional management levels and costs. Increased costs may also result from the need to have timely and accurate information on patients, products, treatment patterns, prices, and quality. Organizations without sufficient information systems will realize these additional costs (Naidu, Kleimenhagen, and Pillari 1993, 10-11).

Complacency and resistance to change on the part of administrative and medical staff are other problems encountered by health care organizations implementing product line management. For many organizations, these problems have resulted in such a difficult transition period that product line management has failed and has been labeled inappropriate for health care facilities. Strategic planning, communication, and education are critical to preventing or minimizing such problems. Often secondary to resistance is the problem related to the role and authority given to the selected product line manager. Resistant administrators often define the product line manager's role as one of complete responsibility for the clinical and administrative operations for the product line, while actually giving the manager little decision-making authority for daily or long term planning activities. It is important to give a product line manager responsibilities and decision-making authority consistent with the management style in the organization (Studnicki 1991, 69).

The “ideal” product line manager, according to Longshore (1994, 18), is a new breed, often requiring extensive hiring incentives, including an annual salary ranging from \$70,000 to \$100,000, relocation assistance, and other benefits. A product line manager with the necessary leadership skills, a master’s degree, and at least five years of health care administrative experience encompassing marketing, interpersonal communication, and strategic planning responsibilities is difficult to locate and recruit. This hardship, when combined with the high salary needed to entice an applicant, often leads management to select a lesser qualified, but accessible, product line manager from within the organization. According to Michael Bowers (1996), product line management has lost its “sex appeal” in the private sector primarily because of its expense and the poor track record of those less qualified product line managers selected by management.

Organizations experiencing resistance, complacency, unqualified product line managers, and unclear managerial roles for product line managers create much confusion and chaos for themselves. Three additional problems are often encountered amidst this chaos:

- ✱ Unproductive internal competition and strife can lead to the possible loss of valued employees;
- ✱ Ignoring other essential services that have not yet become product lines results in potentially reduced marketability, patient population, and profit margins; and
- ✱ Emphasis on short-term profitability instead of long-term growth results in failure of product line management approaches in the organization (Lowe 1987, 10-11).

Many, if not all, of these problems are avoidable if departmental cooperation replaces competition. However, in most organizations, there has been no cooperation among traditional departments to encourage internal networking.

### **Private Sector Experiences with Product Line Management**

The literature related to product line management experiences in the health care industry was predominantly published from the mid-1980s to the early 1990s. Three descriptive studies of hospitals organized for product line management are documented by authors, including: Dr. Michael Bowers, Assistant Professor, School of Business, University of Alabama at Birmingham (Bowers 1990); G.M. Naidu and Arno Kleimenhagen, Professors of Marketing at the College of Business and Economics, University of Wisconsin-Whitewater, with George D. Pillari, President of Health Care Investments Analysts Inc., Baltimore Md. (Naidu, Kleimenhagen, and Pillari 1993); and John K. Ruffner, Director of Marketing at Alta Bates Corporation, Berkeley, California (Ruffner 1986). Each described the reasons for implementing product line management, the problems encountered, and the advantages realized after product line management was implemented. Other authors have also described personal experiences in implementing product line management (Benz and Burnham 1986) (Patterson 1993).

In 1986, Ruffner investigated five health care organizations that had been working with product line management for over two years. By conducting open-ended telephone interviews with management, he determined what makes product line management work. Physician involvement in implementing product line management and the development of a strategic business plan are crucial to the product line's success. The Norfolk (Virginia) General Hospital implemented product line management due to a drop in market share, occupancy, and revenue. Executives reported improvement in market status and more control over cost behavior, but a desire to further improve accountability and cost management. The University Hospital in Cleveland, Ohio, implemented product line management to create managerial accountability in

costs, productivity, and quality. It was successful in aligning management centers with medical specialties. Baylor Health Care Systems in Dallas, Texas, implemented product line management due to decreasing market share expansion and pressures to reduce costs. The organization's culture shifted to a marketing orientation, and business plans were developed to review profitability and product line performance (Ruffner 1986, 11-14).

The Thomas Jefferson University Hospital, in Philadelphia, Pennsylvania, implemented product line management in response to inpatient care alternatives, increasing competition, and the growth of multihospital systems and prepaid plans. With intense input from physicians, management logically arranged the International Classification of Diseases-9th Revision-Clinical Modification (ICD-9-CM Codes) into clinical groups, which became the product lines. As a result, the hospital "increased its efficiency by encouraging customer-oriented thinking, enhancing communication with physicians and patients, and helping the institution to compete more effectively (Ruffner 1986, 12) (Benz and Burnham 1986, 38-40). All five of the organizations studied by Ruffner experienced problems with, and considerable time spent in, developing information systems and the product line manager's role and authority description (Ruffner 1986, 15).

Bowers conducted an exploratory study of eight progressive, full-service, not-for-profit hospitals, to identify underlying issues involved in hospitals organizing for product line management (Bowers 1990, 369). Utilizing a set of questions, he conducted telephone interviews with managerial staff from the eight hospitals (Bowers 1996). The common reasons given for implementing product line management were competition, a need to better manage a number of services, and a need to be more sensitive to patient needs. Two barriers to implementing product

line management were identified: administration and physician resistance to change from a traditional managerial style, and operational difficulties in developing information and cost-reporting systems. Managerial staff from all involved hospitals reported increased profitability, but stated it was too soon to report long-term effects (Bowers 1990, 370-374). To date, Bowers has not conducted a follow-up study (Bowers 1996).

In the early 1990s, three researchers conducted an extensive study utilizing a mail-out survey focusing on the marketing and financial aspects of product line management. Their sample included 154 high-performance hospitals (9% federal or state government, 74% church or community, and 17% investor-owned) that implemented product line management to survive intense competition. The purpose of the study was to "examine the impact of product line management on operating results and profile hospitals in which product line management has been associated with higher performance" (Naidu, Kleimenhagen and Pillari 1993, 7-11). The authors recommended further research including a study of performance indicators, such as customer satisfaction, net earnings, occupancy rate, and profit margins before and after implementing product line management. They concluded that product line management is not appropriate for every hospital. It is appropriate for "a hospital of at least medium size, located in a highly competitive market area serving approximately 200,000 or more, that demonstrates a marketing orientation and features areas of 'excellence' in their product mix" (Naidu, Kleimenhagen and Pillari 1993, 16). (Refer to APPENDIX B, Analysis of Conducted Research.)

In 1992, Barnes Hospital, a 1200-bed teaching medical center in St. Louis, Missouri, implemented product line management (ophthalmology, ear/nose/throat, neurology, cardiac, general surgery, and obstetrics/gynecology), and included operating room nurses reporting to



product lines they serve. Partnerships between the hospital and affiliated medical schools were negotiated so that product line profits were split between the two organizations. OR nurses served as product line directors in the operating room and were responsible for the business operations and measurement of clinical performance of the product lines. Each product line implemented care pathways covering the continuum of care. Policies and procedures across product lines were developed. Staff believed they had a direct impact on changing and improving the health care environment. Following its merger with Jewish Hospital, both staff engaged in joint planning for product line management to avoid duplication of services (Patterson 1993, 20-21).

### **Purpose**

The purpose of this qualitative, descriptive study was to develop alternative approaches for implementing product line management in the STVHCS. Recent product line management experiences in VHA hospitals and an assessment of the managerial style in the STVHCS were considered in developing the approaches. Alternative approaches (dependent variables) were a function of six elements (independent variables). The independent variables included selected STVHCS managerial personnel's perceptions or opinions of the following: the envisioned STVHCS product line management organizational structure; anticipated problems in implementing product line management; expected benefits of product line management; expected qualifications of the product line manager; the product line manager's role and responsibility; and whether or not the STVHCS should implement product line management. Information from the VAMC Director Survey was utilized primarily to determine what has, and has not, worked in

those VAMCs organized in product lines. The following specific elements are addressed: reasons for implementing and not implementing product line management; selected product lines; scope of staff involvement in implementing product line management; the product line manager's educational and work background; the product line manager's role and responsibilities; designation of fiscal accountability; and obvious problems and benefits of product line management. Information from the VAMC Director Survey was also utilized to determine the most common strategic orientation for product line management and the decentralized approaches chosen in VAMCs organized along product lines.

## **CHAPTER II**

### **METHOD AND PROCEDURES**

#### **Study Design**

This was a descriptive study of qualitative data collected by a mail-out survey and personal interviews. It involved two phases: an assessment of all VHA facilities' involvement with product line management, and an assessment of the STVHCS management style.

#### **Phase 1: VHA Experiences with Product Line Management**

An assessment of VHA experience with product line management was accomplished through the use of a mail-out survey to 164 VHA Medical Center (VAMC) Directors under a cover letter signed by the Director/STVHCS. (Refer to APPENDIX C, Survey of VAMC Directors; APPENDIX D, Letter to VAMC Directors; and APPENDIX E, List of VAMCs Receiving Mail Survey.) The surveys were mailed on November 15, 1996, with instructions to return them by December 15, 1996. Confidentiality of the respondents and their respective locations was ensured by not requiring signatures or stated locations, unless they indicated a desire to receive a copy of the study results. In an effort to control the response rate and in response to several Directors' requests for an extension of the due date, letters were mailed to all VAMC Directors on December 16, 1996, reminding them of the need to complete and return the

surveys by January 1, 1997, if they had not already done so. (Refer to APPENDIX F, Follow-Up Letter to VAMC Directors.)

### Survey Instrument

The survey was five pages, printed front to back. It consisted of twenty-six questions. Those Directors of facilities not organized along product lines were asked to complete ten questions. Those Directors of facilities organized along product lines were asked to complete twenty-two questions. The survey had eleven "Yes/No" questions, fourteen with possible answers from which to choose all that applied, and one short answer question. The purpose of the survey was to:

1. Determine those VAMCs which had implemented product line management or were in the process of implementing product line management;
2. Identify the most common reasons for not implementing product line management, given choices of: lack of knowledge about product line management; resistance to change by administration, medical staff, and employees; costs; insufficient information system; and perceiving no need to change the organizational structure;
3. Identify the most common reasons for implementing product line management, given choices of: reducing and controlling costs; determining the cost of care in each product line; improving the quality of care; reducing duplication of services; responding to expressed veteran needs; restructuring the organization; reducing bed days; reducing the average length of stay (ALOS); and being directed to do so by superiors;
4. Determine the length of time product line management had been implemented in VHA facilities;

5. Identify the most common problems encountered in the implementation process, given choices of: resistance by top management, physicians, clinical employees, or administrative employees; cost; selecting product line managers; insufficient information systems; defining product line management; selecting product lines; patient complaints; and excessively time-consuming;

6. Identify steps taken by the VAMC to reorganize for product line management, given the following choices: organization's mission developed; organization's vision statement developed; followed consultant's plan; organization's strategic plan developed; product line management education for management; product line management education for medical staff; product line management education for all services; developed product line manager roles and responsibilities; identified product lines; decentralized fiscal factors to product lines; identified organization's product line management role; identified product line manager's authority; developed product line business plans; developed employee product line management communication plan; assessed information systems; piloted one or two product lines initially; developed product line performance measurement plans; implemented or revised information systems; collaborated with other VAMCs in the VISN; collaborated with VISN Director; developed critical pathways (protocols); selected product line manager(s); developed product line management organizational chart; product line's mission developed; product line's vision statement developed; defined product line management in the facility; and reviewed current literature re: product line management approaches;

7. Identify the most common selected product lines, given choices of: ambulatory care; acute care; surgical service; substance abuse; rehabilitation service; bone marrow transplant; spinal

cord injury; dental service; operating room; medical service; mental health; long term care; organ transplant; dialysis; and domiciliary;

8. Identify the educational background of chosen product line managers, given choices of: high school diploma; baccalaureate degree; master's degree in public health administration; doctorate; master's degree in health care administration; associate degree; master's degree in nursing; medical degree; and degree in an allied health profession;

9. Identify the product line managers' titles prior to product line management implementation, given choices of: Chief of Staff; Chief, Surgical Service; Chief, Social Work; Chief, Medical Service; Chief, Nursing Service; Chief, MAS; Chief, Fiscal Service; Chief, Ambulatory Care; Chief, Psychiatry Service; Assistant Chief, MAS; Assistant Chief Nurse; Clinical Nurse Specialist; Case Manager; Administrative Officer; Associate Director; Assistant Director; Head Nurse; Medical Director/LTC; Chief, Spinal Cord Injury Service; Chief, Rehabilitation Service; Chief, Dental Service; Administrative service employee; Clinical service employee; Medical Director/Bone Marrow Transplant; Administrative Service Supervisor; and Clinical Service Supervisor;

10. Identify the number of product line managers per product line, and to whom the product line managers report;

11. Determine if fiscal responsibilities are decentralized to the product line manager; and

12. Identify the most common benefits realized as a result of product line management, given choices of: decreased costs; decreased ALOS; decreased bed days; improved quality of care; decreased waiting times; increased access to care; improved patient satisfaction; improved employee satisfaction; and decreased duplication of services.

In an effort to individualize the responses, an "Other" alternative answer, with space to write an answer, was provided on questions where choices were provided. The survey also provided various demographic data, such as: the size of the facility; clinical services provided; the presence of graduate medical education affiliations; and information related to the respondents' knowledge of product line management. All participants were given the opportunity to indicate a desire to receive a copy of the study results.

Descriptive statistics, using SPSS<sup>3</sup>, were utilized to determine: the most significant reasons for implementing and not implementing product line management; the most commonly cited problems and benefits of product line management; the most common product lines chosen; the most common educational backgrounds of product line managers; the most common prior titles of selected product line managers; and trends in demographic data. In addition, the relationship of the VAMC bed size to graduate medical education affiliations was measured using Pearson correlation. (Refer to APPENDIX G, Mail-Out Survey of VAMC Directors: SPSS Statistical Codes.)

#### *Survey Instrument Pretest*

Because the survey instrument was untried, it was pretested in October 1996, in an effort to provide a check on its validity and reliability. The pretest was accomplished utilizing eight Army-Baylor Administrative Residents in the San Antonio area, a nurse researcher, three Army-Baylor faculty, and the STVHCS Director, Associate Director, and Chief of Staff as participants. Each of the non-VHA pretest participants was asked to complete the survey instrument and offer

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<sup>3</sup>SPSS for Windows, Version 7.0, is a computer software program which provides "Real Stats Real Easy" utilizing data collected by researchers.

comments regarding question clarification, question format, repetition of questions, and the instructions provided, as well as any other constructive criticism. The three VHA pretest participants were asked to review the survey instrument and offer comments regarding question clarification, repetition, format, and relevancy to the VHA.

The researcher reviewed the non-VHA participants' answers to determine if the information provided met the researcher's expectations and intent in asking the questions. Based upon feedback from all participants and the researcher's review of answers, the survey instrument was revised. The primary recommended changes included adding specific choices to each question, thus reducing the requirement for narrative responses by Directors. Participants reported it took approximately twenty-five minutes to complete the survey. The participants' responses to the questions met the expectations and intent of asking the questions.

## **Phase 2: STVHCS Management Style and Operations**

The purpose of Phase 2 was to conduct an assessment of the STVHCS managerial style. Personal, one-on-one interviews were conducted at scheduled times by the researcher with the following thirteen key managerial personnel: Director; Associate Director; Chief of Staff; Administrative Officer/Managed Care; Administrative Officer/Kerrville Division; Chief Medical Officer/Kerrville Division; the Chiefs of Medical Administration Service (MAS), Fiscal Service, Human Resource Management (HRM), Nursing Service, and Medical Service; and the Associate Chiefs of Staff (ACOS) for Ambulatory Care and Extended Care. Non-response error (availability of participant) was minimized by the researcher. Appointments for one-on-one interviews were made by telephone. Cancellations or postponements were handled by the



researcher's rescheduling of appointments by telephone.

Prepared questions were asked of each individual. (Refer to APPENDIX H, STVHCS Key Management Interview.) A list of some factors (possible responses found in the literature) related to each question was included on the instrument for the researcher's benefit in documenting the participant's responses. The purpose of the interviews was to obtain a description of the key managerial personnel's perceptions of the following: whether and how product line management should be implemented in the STVHCS; the anticipated problems and benefits to be realized by implementing product line management; the "ideal" candidate for product line manager; and the product line manager's role and responsibility. Commonly stated responses and trends were identified from the descriptive responses by the researcher. To establish inter-rater reliability, an objective non-VHA participant was asked to review the researcher's analysis of the interviewees' responses.

A review of the VISN 17 Heart of Texas Network and the STVHCS mission statements, the STVHCS vision and values statements, and the VISN 17 "Network Plan for FY 1997 - FY 2001" was conducted by the researcher to identify objectives and goals similar to those found in the product line management literature. (Refer to APPENDIX I, Mission - Vision - Values.) Based upon the findings from personal interviews and from reviewing documents, inferences about the STVHCS management style were made. Utilizing the findings from Phase 1 and Phase 2, and comparing them to product line management approaches described in the literature, the researcher was able to develop alternative approaches to implementing product line management in the STVHCS.

### **Reliability and Validity**

Reliability and validity were established by pretesting the survey instrument. Inter-rater reliability of the researcher's analysis of the personal interview responses was established by using a non-VHA participant, who reviewed all responses and provided a descriptive analysis.

Validity was established through the use of the same mail-out survey to each VAMC, the same personal interview format for each key manager, and the same (i.e., a single) interviewer. Content validity of the survey and personal interview questions was established based upon the researcher's judgment that questions were representative of the current literature on product line management. Face validity was established by a review of the survey by three STVHCS key managerial personnel. Limitations included having no control over who actually completed the surveys and only moderate control over survey response rates.

## CHAPTER 3

### RESULTS

#### Phase 1: VHA Experiences with Product Line Management

The survey was mailed to 164 VAMC Directors on November 15, 1996. On December 15, 127 surveys were returned. However, because several Directors requested an extension, the due date was extended to January 1, 1997. By that time, 137 surveys were returned. Five were incomplete, either missing one or more pages or having three or more unanswered questions. Therefore, 132 surveys were considered valid responses, with a return rate of 80.5 percent. The complete results are found in APPENDIX J, Results of Mail Survey of VAMC Directors.

The first six questions provided demographic information about each facility. As illustrated in Figure 1, 80 percent of those responding were from facilities with up to 600 beds; 13 percent were from facilities with 601-800 beds; and the remaining 7 percent with 801 or more beds. Utilizing the SPSS statistical program, it was

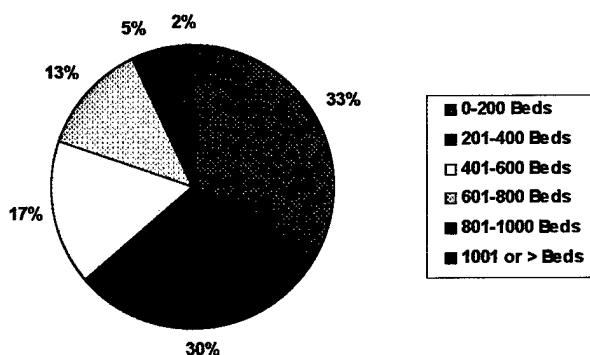
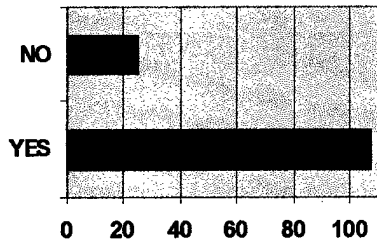


Figure 1: Operational Beds Per Facility

determined that the mean bed size of those reporting was 450 beds. Ninety-three percent of the 137 responding facilities have affiliations with graduate medical education (GME) programs, as illustrated in Figure 2. Utilizing the SPSS statistical program, correlations between bed size and GME affiliations were determined, as



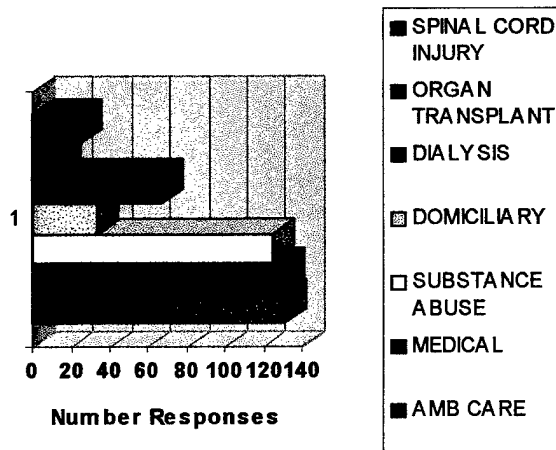
**Figure 2: GME Affiliations**

Correlations		GME	Bed Size
Pearson Correlation	GME	1.000	.249**
	Bed Size	.249**	1.000
Sig. (2-tailed)	GME	.	.004
	Bed Size	.004	.
N	GME	132	132
	Bed Size	132	132

\*\* . Correlation is significant at the 0.01 level (2-tailed).

**Figure 3: Pearson Correlation - GME/Beds**

illustrated in Figure 3. Pearson correlation (.249) is greater than .01, indicating the larger the number of operational beds in a VAMC, the greater the likelihood of a facility having graduate medical education affiliations.



**Figure 4a: Clinical Services Provided**

#### Directors identified clinical services

provided in their facilities. Figures 4a and 4b indicate the number of facilities providing the selected clinical services. The choices provided for Directors to select from were based upon the researcher's knowledge of the most common major clinical services provided in VAMCs, including the STVHCS. In addition to those

options provided in the survey, Directors named many others. Those others listed most were primary care, blind rehabilitation, and radiation therapy.

Almost all Directors (99%) were familiar with product line management, having either read about it in the health care literature, or heard about it from their colleagues, the VISNs, or in seminars, as indicated in Figure 5.

Directors were asked if product line management had been implemented in their facilities. As reflected in Figure 6, thirty percent (40) of 132 Directors responding to the survey had implemented product line management. Ninety-two Directors (70%) had not.

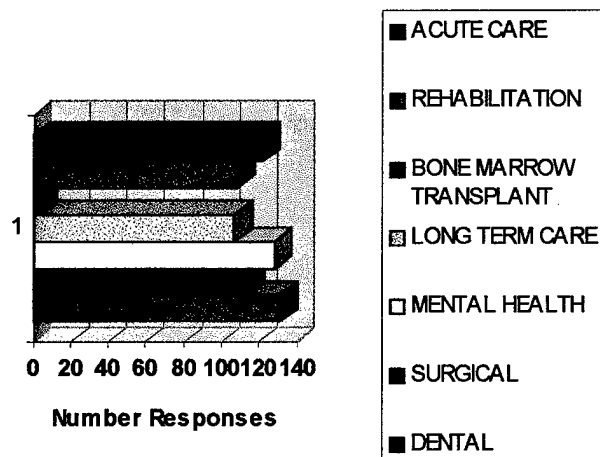


Figure 4b: Clinical Services Provided

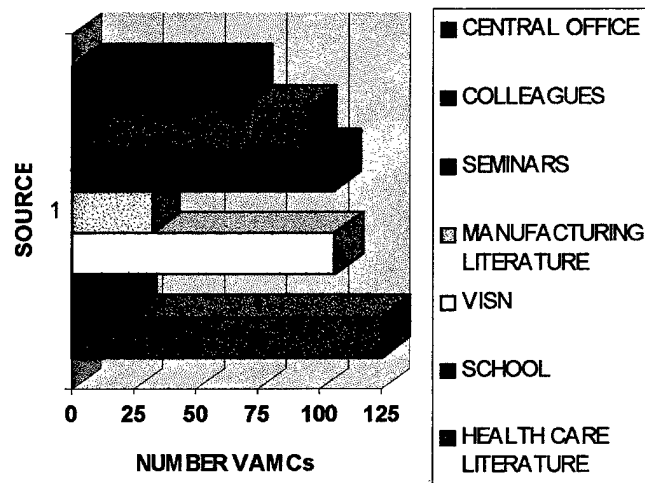


Figure 5: PLM Knowledge Source

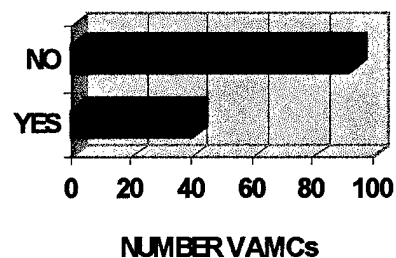


Figure 6: Product Line Management Implemented

The forty Directors that had implemented product line management were asked to complete eleven additional questions. All of the questions were designed to gain knowledge about “lessons learned” by other VAMCs in

reorganizing around product lines. As illustrated in

Figure 7, product line management in the VHA

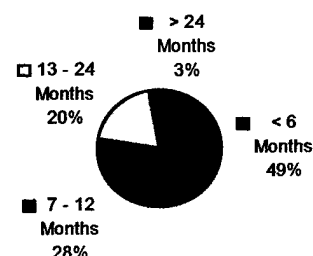
system is a very new organizational approach. Fifty

percent (20 VAMCs) of the forty facilities have

been organized using a product line management

approach for less than six months. Eleven VAMCs

have up to twelve months’ experience with product lines; eight VAMCs, thirteen to twenty-four months; and only one VAMC, more than twenty-four months.



**Figure 7: Length of Time Organized in PLM**

Not all Directors prioritized and selected the driving forces for reorganization. Table 2, therefore, reflects the responses in two manners: (1) by the number of VAMCs indicating each driving force important; and (2) by rank order of importance.

**Table 2.--Product Line Management Driving Forces in 40 VAMCs**

DRIVING FORCE	#VAMCs INDICATING IMPORTANCE	RANK ORDER (N=31)
To reduce costs	28	3
To reduce bed days	27	6
To reduce duplication of services	30	4
Response to expressed veteran needs	23	8
To reduce the average length of stay	25	7
To control costs	27	5
<b>To improve the quality of care</b>	<b>35</b>	<b>1</b>
To restructure the organization	32	2
Directed to do so by superiors	21	9

The primary driving force for implementing product line management was to improve the quality of patient care.

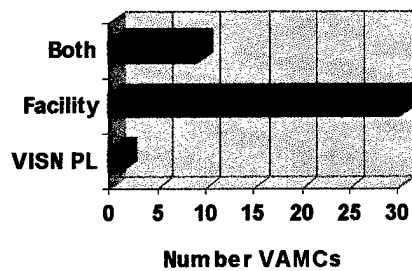


Figure 8: Basis of Selected Product Lines

As illustrated in Figure 8, the chosen product lines in 75 percent (30 VAMCs) of the forty VAMCs are based upon facility-specific services and operations. Mental Health and Ambulatory Care product lines were selected by most of the facilities, whereas other choices on the survey were selected by fifteen or fewer facilities. Figure 9 illustrates the

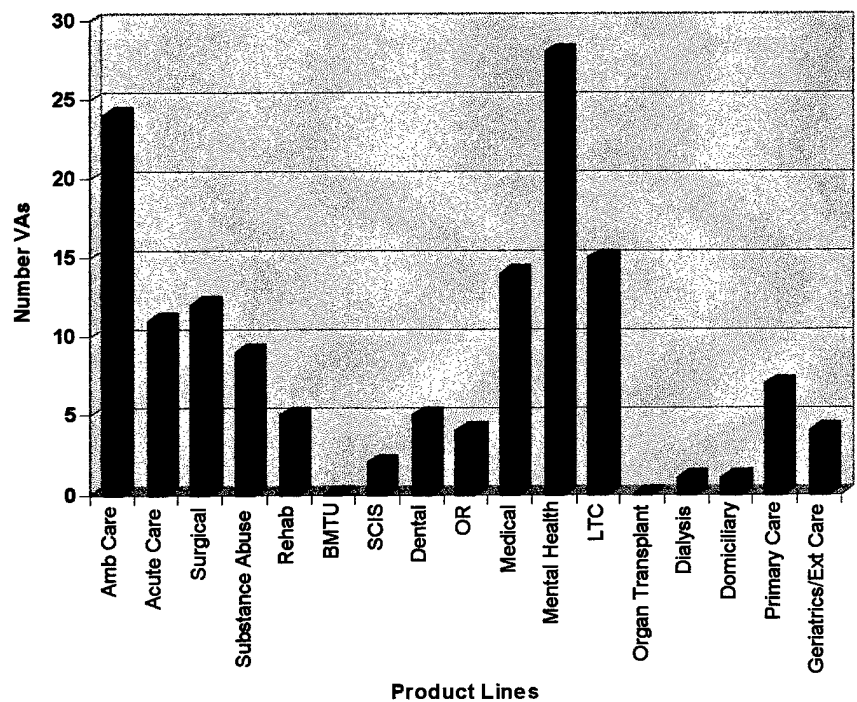


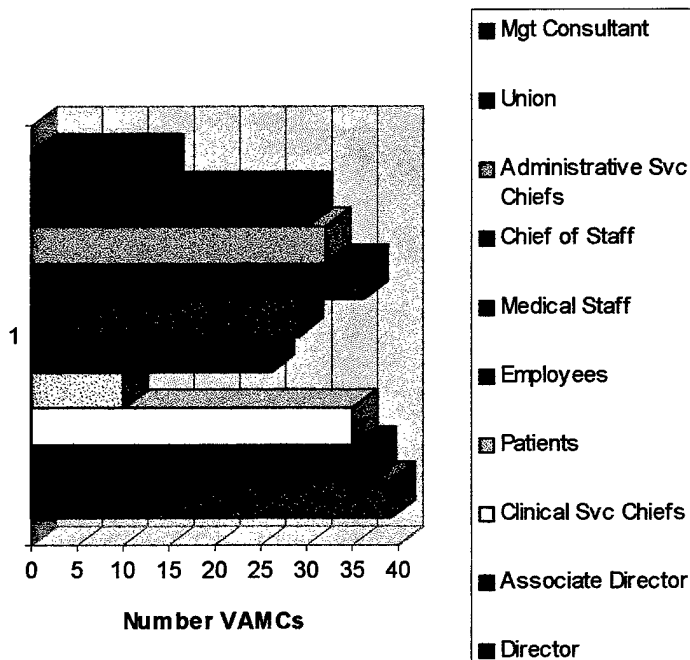
Figure 9: Selected Product Lines in 40 VAMCs

number of the forty VAMCs with product lines in specific clinical areas. Many Directors wrote in other product lines. Some were the traditional services found in a VAMC.

Others combined two or more services into one product line. However, there was no one other

suggested product line that was selected by more than two facilities. Fifteen of the forty Directors stated they had not considered implementing additional product lines. However, long term care and rehabilitative services are being considered by eight facilities and five facilities, respectively.

Figure 10 illustrates the number of VAMCs that included each of the specific individuals



**Figure 10: Planning and Implementation Staff**

or groups in planning and implementing product line management in their facilities. Directors, Associate Directors, Chiefs of Staff, and administrative and clinical service chiefs were involved in planning and implementing product line management in the majority of the forty VAMCs. However, fewer facilities included employees and the medical staff. Only five facilities included patients in the process.

Eighty-five percent (34 VAMCs) of the forty Directors have identified a product line manager. Even though 84 percent stated they had more than one product line manager per product line, it became apparent from the written explanations of role differences that the question was misread or misinterpreted by a few of the Directors. Some interpreted the question as asking if there was more than one product line manager in the facility. However, interpreting their responses generally, where there is more than one product line manager per product line, one



clinical and one administrative manager are selected for each product line. Where there is more than one product line manager, they work together as a management team.

Figure 11 reflects the range of educational preparation of product line managers in the forty VAMCs. By far, most managers have medical degrees. Some Directors offered other qualifying factors,

including managerial

experience and

expertise. One Director

commented on the fact

that educational

requirements are

dictated by the

government pay plan and job classification regulations.

Figures 12a, 12b, 12c, 12d, and 12e show the number of VAMCs with product line managers who were previously functioning in each of the selected prior titles' roles. The prior titles of product line managers most

frequently identified by the Directors

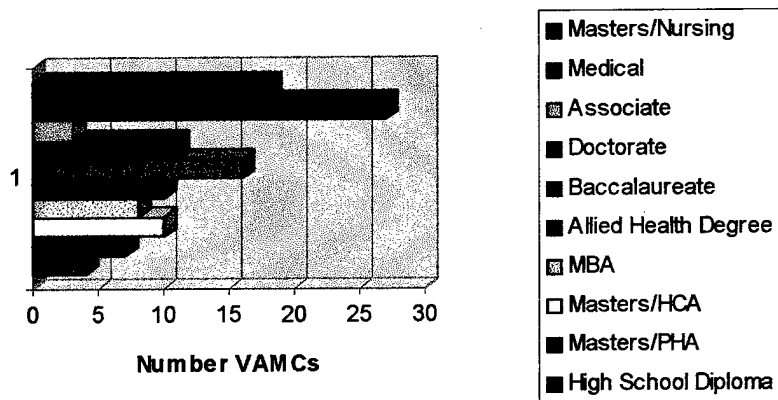
were Associate Chief of Staff for

Ambulatory Care and Chief,

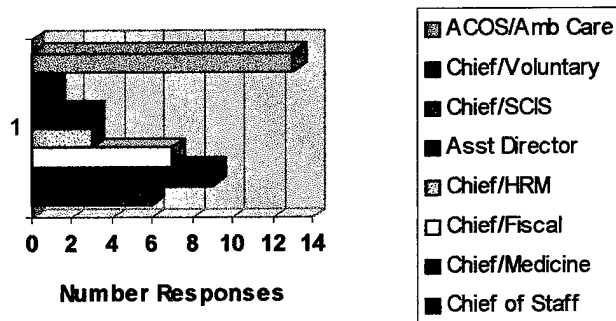
Psychiatry Service, followed by the

Chief, Nursing Service. This

coincides with the fact that the most



**Figure 11: Product Line Manager Educational Preparation**



**Figure 12a: PL Managers' Prior Titles**

frequent product lines selected were Mental Health and Ambulatory Care. The most frequent prior administrative service employee selected as manager was the Chief, Engineering Service.

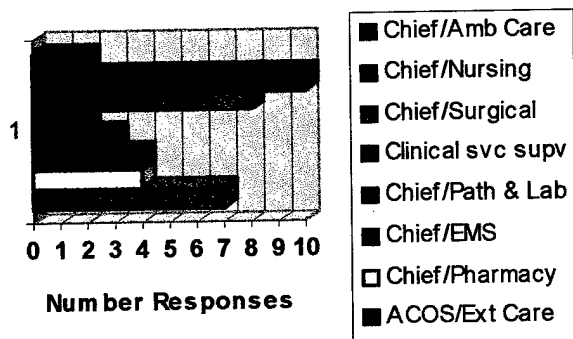


Figure 12b: PL Managers' Prior Titles

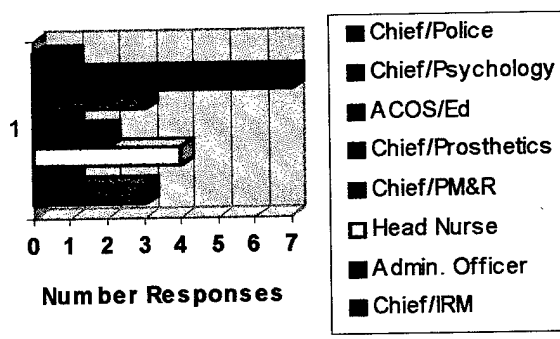


Figure 12c: PL Managers' Prior Titles

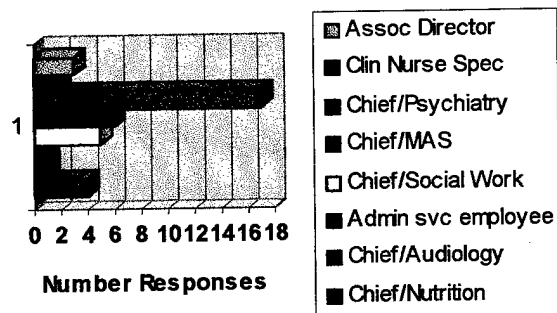


Figure 12d: PL Managers' Prior Titles

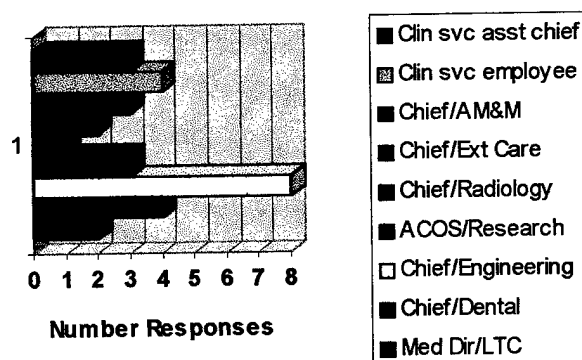
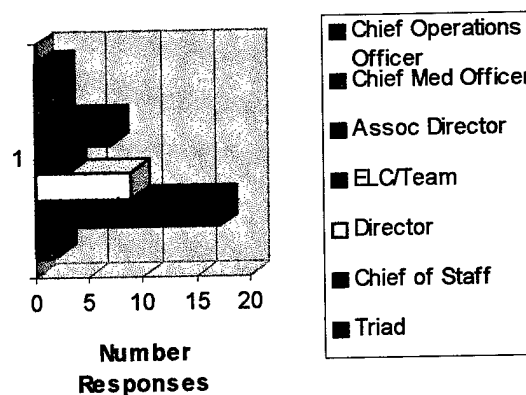


Figure 12e: PL Managers' Prior Titles

Figure 13 illustrates the chains of command identified for product line managers in the forty responding VAMCs. Forty-three percent (17 VAMCs) of the Directors stated the product line managers are responsible to the Chief of Staff. The fact that two clinical product lines, Mental Health and Ambulatory Care, were implemented more often than any others, including administrative or business-related product lines, probably accounts for the large number of product line managers



**Figure 13: PL Manager's Chain of Command**

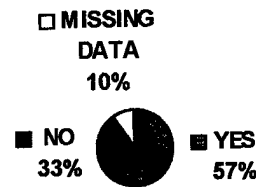
reporting to the Chief of Staff.<sup>4</sup> Twenty-three percent (9 VAMCs) stated that product line managers report to the Director, and 18 percent (7 VAMCs) stated that they report to the Associate Director. Some facilities are organized in such a way that product line managers report to an authority group, such as the Executive Leadership Council (ELC) or the Triad. It was unclear from their responses whether the ELC is a facility or VISN group. Based upon this researcher's knowledge of the organizational structure of VISN 17 (Heart of Texas), the ELC is most likely a VISN group. In some VAMCs, the product line managers report to the Quality Management Board, Board of Directors, Managed Care Board, or to the VISN product line manager or chief.

Figure 14 illustrates the number of VAMCs decentralizing fiscal responsibilities to the product line managers. The question was asked with the intent of measuring the authority of

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<sup>4</sup>In the VHA system, the Chief of Staff is responsible for all clinical programs and services. The Associate Director is responsible for all administrative services and fiscal and plant operations.

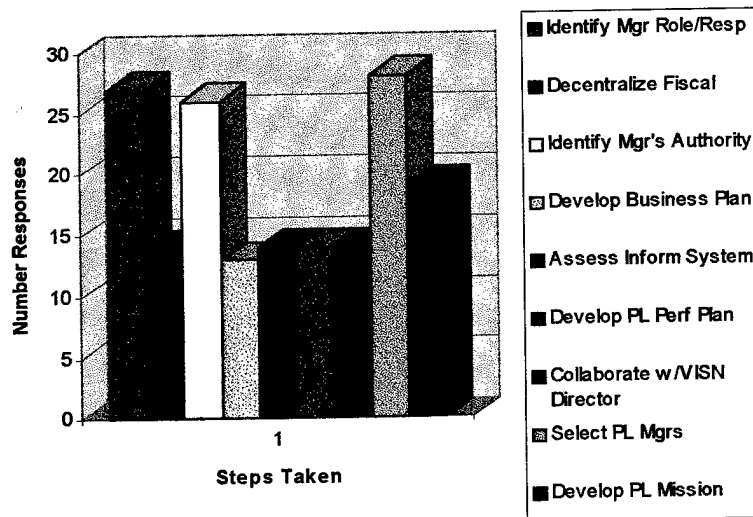
product line managers in the VAMCs. Fiscal responsibilities are decentralized to the product line manager in twenty-one of the forty VAMCs. This implies that some Directors have not given product line managers full authority for ultimate decisions within the product lines.



**Figure 14: Fiscal Responsibilities Decentralized**

All possible choices of steps taken to implement product line management provided on the survey were based upon the researcher's review of the literature. The step most commonly identified by Directors was "Identify product lines" (78 percent or thirty-one of the forty responding Directors). Figures

15a, 15b, and 15c illustrate the number of VAMCs that performed selected steps to implement product line management in the facilities. The survey results imply that most Directors focused primarily on global strategic planning



**Figure 15a: PLM Implementation Steps Taken**

steps. For example, in addition to identifying product lines, steps taken by most Directors included the following: developed the organization's mission and vision statements, defined

product line management in the organization, developed the product line manager's roles and responsibilities, identified the product line manager's authority, reviewed the current literature, and developed the product line strategic plan and organizational chart.

Involvement of employees, including educating staff, management, and medical staff and developing a communication plan were each considered by fifty percent or less of the Directors. Thirty-five percent or less focused on

information systems and other factors related more specifically to the product lines, such as developing product line business plans, vision and mission statements, and critical pathways.

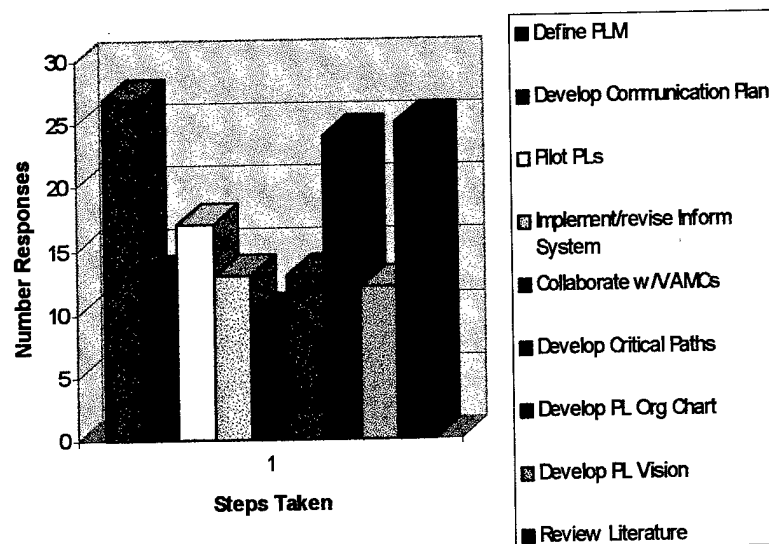


Figure 15b: PLM Implementation Steps Taken

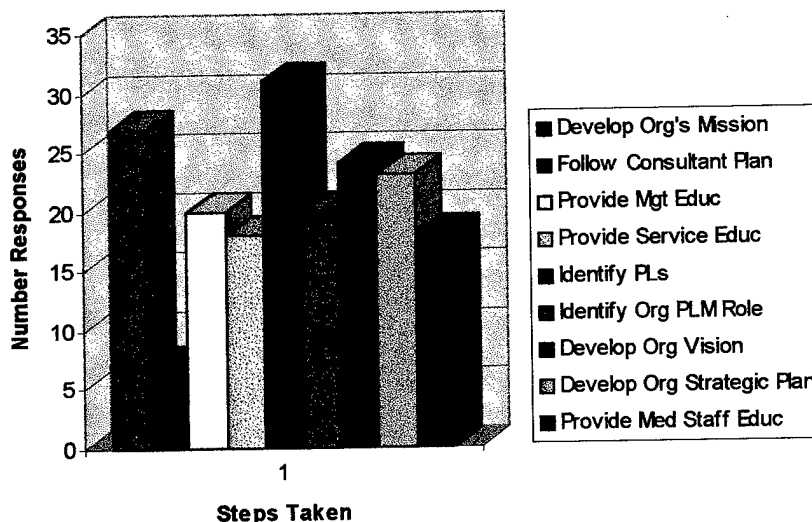


Figure 15c: PLM Implementation Steps Taken

Directors identified the problems they experienced in implementing product line management. By far, the most common problem was related to reorganizing the traditional functional services within a VAMC. Figure 16a illustrates the number of VAMCs experiencing specific problems.

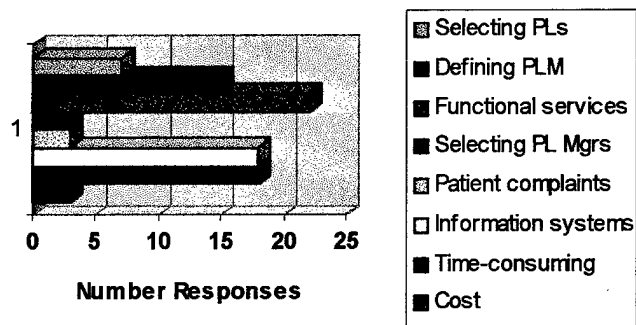


Figure 16a: Identified Problems

Figure 16b reflects the resistance by top management (5 percent or two VAMCs), clinical employees (45 percent or eighteen VAMCs), physicians (40 percent or twenty VAMCs), and administrative employees (45 percent or eighteen

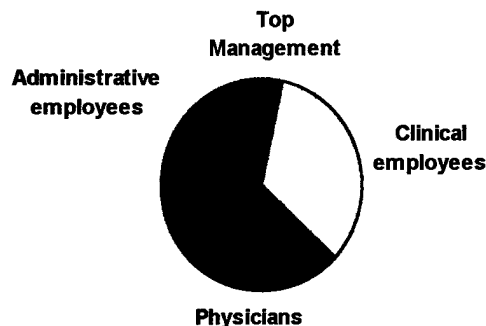
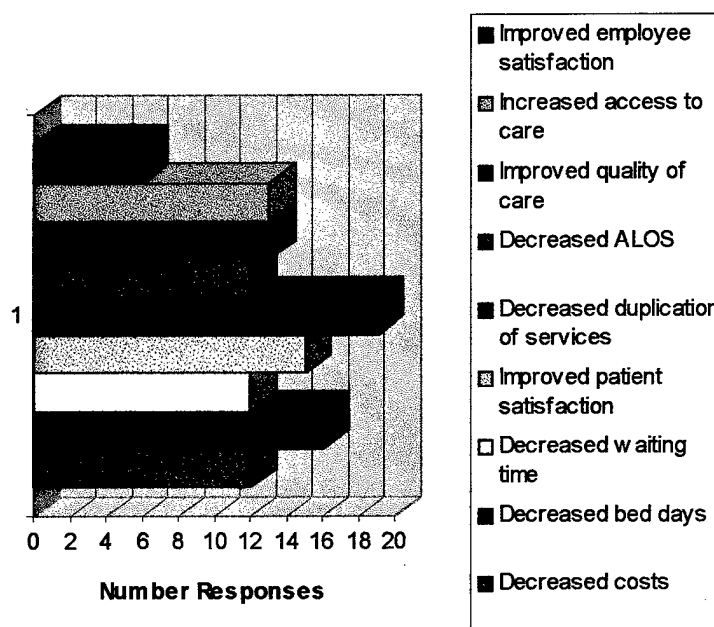


Figure 16b: Identified Problems - Resistance

VAMCs) in the forty responding VAMCs. Other comments related to problems were provided by some Directors, including the following:

- ✧ Accountability! Product line managers did not see themselves responsible for all aspects of new operations.
- ✧ We tried product lines, have evaluated, and have found services actually were worse in many cases. We have since corrected them.
- ✧ There is resistance in assuming financial responsibility for product lines.
- ✧ It is difficult at small hospitals as employees have to do more than one job.

Directors identified benefits they had realized as a result of product line management, as illustrated in Figure 17. Almost half of those responding stated there has been a decreased duplication of services provided with the product line management approach. However, the previously identified primary driving force for implementing product line management, to improve the quality of care, has been realized



**Figure 17: Identified Benefits**

by only thirteen facilities. Thirty percent (12) of the forty Directors stated it was too early to evaluate and identify any benefits. This response coincides with the fact that 50 percent of the forty responding VAMCs had been reorganized around product lines for six months or less. Other identified benefits and comments were provided, including the following:

- Many of the benefits have occurred, but product lines had nothing to do with it.
- Information management, business managers, and parts of Medical Administration Service (MAS) were successful.
- We have increased outpatient services.
- Communications have increased and improved.
- Product line reorganization has aligned the facility with the VISN.

The ninety-two Directors that had not implemented product line management were asked to complete three additional questions. Fifty of them stated they had active plans to implement it

in the near future, some as early as March or April, 1997. Seven Directors did not respond to the question, but did provide their perceived reasons for not implementing product line management.

Figure 18 shows the percentage

of the ninety-two Directors

perceiving selected choices as

reasons for not implementing

product line management.

Many qualified their responses

by stating they were either

planning to implement it or

were in the process of implementing it. Of the choices provided in the survey, Directors

overwhelmingly perceived the biggest reason to be a lack of product line management knowledge,

followed by their belief that the organization's current structure is effective. At least eight

Directors cited each of the following three other factors as a reason for not implementing product

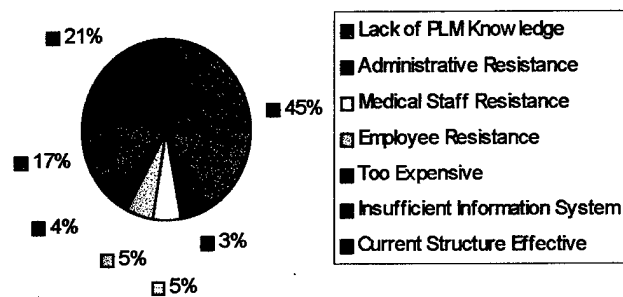
line management in their facilities:

- \* We do not have demonstrated results of product line management success.
- \* We are awaiting publication of the VISN Strategic Plan.
- \* The VISN Planning Board is currently developing a prototype for facility guidance and implementation.

A few of the Directors stated that because of the many VHA system-wide changes taking place

and requiring immediate attention, product line management reorganization was not a high

priority.



**Figure 18: Reasons for Not Implementing PLM**



Seven Directors did not indicate whether they would like additional knowledge about product line management. As illustrated in Figure 19, eighty-four percent (71 VAMCs) of the eighty-five responding



**Figure 19: Desire for PLM Knowledge**

Directors would like additional knowledge. Many commented that they desired to read and hear about a VAMC's success with product line management before making any decision to reorganize around product lines.

The survey provided a wealth of information about the VHA's experiences with product line management. Much like the private sector's experiences in the late 1980s and early 1990s, many VAMCs have experienced resistance by various groups of employees, problems with insufficient information systems, increased time-consuming processes, decreased duplication of services, and reduced number of bed days. As in the private sector, the product line management approach to reorganizing is not yet widely accepted as the most effective and efficient organizational structure in the VHA system.

### **Phase 2: Assessment of the STVHCS Management Style and Operations**

Detailed responses from the thirteen personnel interviewed are provided in APPENDIX M, Results of STVHCS Key Management Interviews. A total of seven administrative and six clinical managerial staff representing the Audie L. Murphy and Kerrville Divisions were interviewed. Each interview took thirty minutes to one hour. To protect their privacy and

anonymity, participants are referred to (in APPENDIX M) as A through M.

As many of their stated key points as feasible were written during the interview by the researcher so that an objective analysis could be completed. In an effort to check the validity of the interpretation and analysis of provided information, the researcher thoroughly discussed the participants' responses (as compared to product line management approaches described in the literature) with a non-VHA U.S. Army-Baylor Administrative Resident in the San Antonio area. The researcher's interpretation and analysis of the interview participants' responses were validated.

The first question asked was to learn management's perception of how they would envision product line management in the STVHCS. The majority spoke primarily of clinically related product lines in a service-oriented, matrix<sup>5</sup> approach implemented on top of the existing traditional organization. Many made comments implying, or directly referencing, a matrix or modified matrix approach, such as the following:

- ☐ Administrative services should be fully matrixed through the product lines.
- ☐ Nursing should be included in the acute medicine product line (medicine/surgery).
- ☐ The matrix structure that transitions to product line management should happen for all services.
- ☐ Hands-on services should be managed through product line management, matrixed on top of the traditional organizational structure.
- ☐ Administratively, we need to maintain the specialists from administrative services in each shop under the product line manager.
- ☐ Nurses, social workers, and chaplains should be encompassed in product lines.
- ☐ I envision a modified matrix team approach that would result in increased productivity with decreased numbers of staff.

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<sup>5</sup>For the purposes of this study, matrix approach refers to employees from several traditional services being assigned to specific product lines. Their respective traditional services are responsible for their performance in the product line, rather than the product line manager.

There seems to be a consensus that, if the STVHCS implements product line management, it should begin in the major clinical service areas, based upon the previously identified product lines. Three participants addressed the question more globally, referring to Network product lines or Headquarters' Strategic Healthcare Groups as the basis for implementation.

Participants identified several perceived foreseeable problems with implementing product line management in the STVHCS, including the following:

- ✱ Product line manager selection;
- ✱ Chaos and confusion regarding authority lines;
- ✱ The traditional resistance to change;
- ✱ Top management and physician resistance;
- ✱ Turfdom, changed loyalties, and loss of comradery from top to bottom;
- ✱ Reorganizing and integrating functional services;
- ✱ Orienting and training staff to track product line costs;
- ✱ Insufficient information systems; and
- ✱ Loss of employee expertise regarding VHA regulations, eligibility and legal issues, data validation, medical care cost recovery (MCCR), and fee basis.

All but one of these foreseeable problems are very similar to those experienced in the private sector, as discussed in the literature review. The one different problem is the loss of employee expertise regarding VHA regulations, eligibility and legal issues, data validation, MCCR, and fee basis. It is perceived that there will be very few employees, if any, who will have the necessary expertise to fully train future employees. This problem is unique to the VHA system and directly relates to functions currently performed by MAS.

Likewise, the desired benefits are very similar to those the private sector realized in the 1980s and early 1990s with product line management. Most of them have also been identified by other VAMCs that have product line experience, as discussed in the VAMC Director Survey results. Those desired benefits by the STVHCS managerial personnel include the following:

- ☆ Improved quality of care through integrated delivery systems and facilitation of the patient across the spectrum of care;
- ☆ Decreased costs through cost avoidance and reduced administrative costs;
- ☆ Improved customer/patient satisfaction;
- ☆ Improved teamwork and synergism;
- ☆ Breakdown of self-imposed internal organizational barriers;
- ☆ Decreased clinical redundancy; and
- ☆ Strengthened graduate medical education through education and research product lines.

Reducing the administrative costs was addressed by two participants, who believe the number of chiefs, assistant chiefs, and supervisors should be decreased. One suggested that the number of chiefs should be decreased, rather than assistant chiefs, and the assistants should report to the product line managers. The apparent skepticism by management about product line management was also evident in their discussion of desired benefits. One participant, while realizing it is supposed to be cost beneficial, warned against implementing product line management just for the sake of doing it because it really may not be cost beneficial. This individual is also not convinced such an organizational approach would improve the quality of care to the veterans. Fully implementing primary care could result in the same benefits, independent of product line management.

The four qualifications of a prospective product line manager most frequently identified by the participants, included clinical and managerial expertise (business savvy), communication skills, and health care administration knowledge. Participants believed the manager should have the experience and scope of the Chief of Staff or Associate Director. Ideal personal qualities would include being approachable, flexible, organized, compassionate, committed, respected, open-minded, and willing to change, learn, and be exposed to different responsibilities. Those who

spoke of only clinical product lines suggested that a lead clinician (physician) should be the product line manager with a Health System Specialist (Administrative Officer) supporting the administrative functions. One participant spoke of an interdisciplinary product line team managing the product line. Such a team would include representatives from the clinical, research, education, and administrative areas.

The STVHCS managerial personnel, in general, view the product line manager's roles and responsibilities as the following:

- Monitoring operations;
- Monitoring clinical programs;
- Monitoring workload;
- Formulating and monitoring the budget; and
- Performing personnel management activities.

To accomplish these roles and responsibilities, the product line manager should have excellent delegative and negotiations skills. He or she should be visionary and elicit ideas from others. He or she should be empowered and have the final authority (greater than a chief) to make decisions regarding the product line's operations and functions. The product line manager should have the authority to take risks, be innovative, and "think outside the box." Even though some had mixed views on the need for an Associate Director or Director if there were Network product lines, most stated the product line manager should report to the Director through the Chief of Staff.

Three of the thirteen participants do not believe the STVHCS should implement product line management because of reported bad experiences in other VAMCs, the inability to meet the salary requirements of an experienced product line manager, and the feeling that it may not be the wisest and best thing to do to carry the STVHCS into the next millennium. A fourth participant believes incentives and motivations are diluted in product line management. Five participants

responded in a manner that could be perceived as a qualified "yes" or "no." Rather than giving a clear answer, they offered suggestions of what needed to occur before implementing product line management, including the following:

- ✓ Establish time lines, implementing one product line every six months;
- ✓ Establish staff and goals;
- ✓ Determine if product line management would "fit" in the STVHCS;
- ✓ DSS<sup>6</sup> must be fully functional to provide cost/profit analyses;
- ✓ Pilot one product line;
- ✓ Set up a continual plan action meeting;
- ✓ Provide systematic training; and
- ✓ Appoint a task force to identify common functions in services, determine how to link common functions, and look at functional relationships and corporatism.

Four participants believe the STVHCS should implement product line management. From their responses, it is apparent they believe the product lines should only be clinically related with the purpose of providing improved quality of care and employee teamwork.

Suggested clinical product lines included: following Dr. Kizer's Strategic Healthcare Groups, retaining the STVHCS's current product lines, and retaining the STVHCS's current product lines, but splitting Extended Care and Rehabilitation. One participant believes there should be three product lines: patient care, education, and research. The center of the patient care product line would be based on the natural history of the patient rather than on physician activities.

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<sup>6</sup>The Decision Support System, or DSS, is an electronic information system currently being implemented throughout the VHA system. It will provide management the necessary information to monitor and control costs per provider, per patient care unit, per service, and, potentially, per product line. Implementation in each facility usually takes two plus years.

Although many participants did not believe administrative product lines should be implemented in the STVHCS, several offered suggestions for creating administrative product lines by integrating two or more services. However, most of those participants expressed concerns about retaining functions currently performed in many of the administrative services. They suggested it would be necessary to identify the key functions performed in some administrative services and designate (matrix out) an expert in these functions to a group of product lines. The suggested administrative product lines or service integrations are as follows:

- ☐ Administrative product line: Director/HRM/Fiscal Services;
- ☐ Hospital Services product line: A&MM/EMS/Engineering Services;
- ☐ A&MM/Fiscal/HRM (perhaps MAS) Services;
- ☐ Prosthetics/Pharmacy/Food & Nutrition Services;
- ☐ Library/Chaplain Services;
- ☐ Medical Media/Education Services;
- ☐ A&MM/Fiscal/Engineering Services;
- ☐ HRM/Voluntary/Payroll Services;
- ☐ Engineering/EMS Services;
- ☐ HRM alone;
- ☐ Fiscal/A&MM; and
- ☐ MAS/IRM/Medical Media.

## **CHAPTER 4**

### **DISCUSSION**

#### **Phase 1: VHA Experiences with Product Line Management**

The purpose of the Phase 1 data collection process was to learn about what has and has not worked in those VAMCs that have implemented product line management. With this knowledge, the STVHCS management can be proactive in its strategic planning for implementation of product line management. Even though the VHA system's experience with such a managerial approach is in its infancy, many findings from the VAMC Director Survey are similar to those described in the private sector product line management literature.

#### **Management Approaches to Product Line Management**

The organization's approach to product line management is based upon its strategic orientation (Charns and Tewksbury 1993, 135, 138). The level of control top-management delegates to the product line manager over a product line's operations determines the decentralized approach to be implemented (Zelman and Parham 1990, 29).

#### **Strategic Orientation**

The literature describes three product line management strategic orientations: planning and marketing, budget and control, and service delivery (Charns and Tewksbury 1993, 136-138).



The majority of VAMCs have primarily employed a service delivery orientation, and, to some extent, a budget and control orientation. These two orientations were implied in Dr. Kizer's "Prescription for Change" as a basis for reorganizing the VHA system into a multi-service, integrated, managed health care system (Kizer March, 1996). He stated the goals are to improve the effectiveness and delivery of care and to determine and reduce the costs of providing specific types of care.

In the private sector, a planning and marketing orientation is frequently employed in conjunction with one of the other two orientations (Ruffner 1986, 11). To some extent, that exists in the forty VAMCs, in that many have developed facility business plans; however, the theoretical definition of a planning and marketing orientation states that the product line conducts planning, marketing research, and sales-promotion activities with the ultimate goal of increasing revenues in the product line (Charns and Tewksbury 1993, 137). Federal regulations do not yet permit the VHA system, i.e., the STVHCS, to conduct marketing and sales promotion activities (Brown 29 January 1997).

The service delivery orientation in the forty VAMCs is also evident by the large numbers of selected product lines that are based upon the traditional VAMC clinical services, as illustrated in Figure 9. Moreover, more than 50 percent of the thirty-four "other" implemented product lines listed by survey Directors are clinical. (Refer to APPENDIX J, Results of Mail Survey of VAMC Directors, Question 14.) The selected product lines in the STVHCS are also based upon the traditional VAMC clinical services. Fifteen Directors identified administrative product lines that had been implemented. These product lines reflect the approaches to integrating the traditional administrative services during the reorganization of the specific VAMCs. A more in-

depth review of each of the returned surveys revealed that these integrated services provide administrative support to selected product lines. Whether personnel from each of these areas are matrixed out to different product lines was not clearly stated in all survey results. In fact, more than half of the forty VAMCs stated the most common problem in implementing product line management was related to reorganizing the traditional functional services, which are primarily administrative services.

### Approaches to Decentralization

Of the four decentralization approaches described in the literature (traditionalist, czarist, market-oriented, and service-oriented) (Zelman and Parham 1990, 33)), a mixture of the service-oriented and traditionalist approaches to product line management seems to have been adopted by most of the forty VAMC Directors. The fact that many Directors indicated that the selected product lines included some of the traditional clinical VAMC services (See APPENDIX J, Results of Mail Survey of VAMC Directors, Question 14) implies that a traditionalist approach has been implemented. Representatives from traditional support services function in the product lines, i.e., from the pharmacy or nursing service to the acute care product line. However, they are responsible to their traditional services for their performance in the product line, rather than to the product line manager.

The service-oriented approach is a service looking for a market and best fits organizations under a triadic management system (Zelman and Parham 1990, 33). The selected product lines in the forty surveyed VAMCs are based on the clinical services traditionally offered in a VAMC. Their market populations include the veterans. It is apparent from the survey results and organizational charts provided by some Directors that the triadic management structure still

exists.

The Czarist approach has not been implemented by any Director that responded to the survey. Neither have the VAMCs implemented a market-oriented approach. Such an approach would require the product lines to seek services outside the VAMCs to meet the patient's health care needs. Although there is a VHA system-wide "move" to establish sharing agreements<sup>7</sup> with other health care providers and facilities for specific services, it is not currently intended to eliminate the need for VAMCs. VAMC closures (or even selected clinical program closures, i.e., closures of surgical programs) are met with much resistance by very strong and political Veterans Service Organizations.

One could speculate that the forty surveyed Directors would not want to state they had implemented a traditionalist approach if they had been specifically asked to identify the decentralization approach implemented. That would imply their organizations were resistant to change. They would probably prefer to state that they had implemented only a service-oriented approach. However, because of several factors identified from the survey results, it can be implied that a traditionalist approach does exist. These factors include the following:

- The triadic management system remains in all forty facilities.
- Eighty-four percent of the product line managers are responsible to one of the three members of the triad (Director, Associate Director, or Chief of Staff).
- Only 57 percent of the forty Directors have given product line managers full fiscal responsibilities for the product line's performance.

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<sup>7</sup>The use of sharing agreements in the VHA system is for the purpose of providing services in a more cost-effective manner. They enable VAMCs to provide selected services that, if provided in the VAMC, would require additional capital and personnel resources. The STVHCS has a well-known sharing agreement program that also has generated revenues by establishing agreements with other health care organizations to provide care to their patient population in the STVHCS.

- Only 35 percent of the forty Directors included the decentralization of fiscal responsibilities in the product line management implementation planning process.
- Directors stated there has been resistance by product line managers in assuming financial responsibility for product lines.
- Directors stated product line managers did not see themselves responsible for all aspects of new operations.

The long-standing VHA budgeting system<sup>8</sup> most likely contributes to the hesitancy of Directors to totally decentralize fiscal responsibilities to the product line managers. A change in federal regulations is needed to alter this VHA cultural factor (Brown 29 January 1997; Rachal 30 March 1997).

### **Reasons for Implementing Product Line Management**

In the private sector, product line management was implemented primarily to reduce and control the escalating cost of health care (Ruffner 1986, 11; Bowers 1990, 371; Naidu, Kleimenhagen and Pillari 1993, 7). Unlike this situation in the private sector, in the forty surveyed VAMCs, the primary driving force for implementing product line management was to improve the quality of patient care. However, less than 50 percent have yet to realize improved quality of care as a benefit. The same VAMC Directors stated that reducing costs was the third most important driving force, but only 30 percent have realized this benefit. However, these results, or lack thereof, should not be unexpected because 50 percent of the VAMCs organized

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<sup>8</sup>The budget for each VAMC has traditionally been appropriated by Congress to Headquarters, based upon the workload in the fiscal year three years previous to the current fiscal year. Headquarters has allocated funds to the VISN, and the VISN to facilities. The accountability for budget reconciliation "rests" with the Director and Chief, Fiscal Service. Funds have often been transferred from one local and/or VISN cost center to another to cover overall VHA expenses. Effective budgeting for each product line would require budget allocations to be based upon its previous year's workload, with the manager having fiscal responsibilities.

around product lines have six months or less experience. It usually takes three years of cost data to evaluate product line performance and support any further decision making by top management (Studnicki 1991, 70-71). The fact that almost half of the forty Directors stated there have been decreased duplication of services provided and decreased bed days suggests that reduced costs may be realized in three years.

### **Reasons for Not Implementing Product Line Management**

Bowers (1996) suggested the private sector has abandoned product line management because of the cost of administrative overhead and management's selection of poorly qualified product line managers. However, most of the ninety-two VAMC Directors that have not implemented product line management cited a lack of knowledge about product line management and their beliefs that their current organizational structures are effective as the two primary reasons for not implementing it (Refer to Figure 18). Since most product line managers are previous chiefs or ACOSs, the VAMCs have not experienced additional administrative overhead costs. Only after evaluating the productivity costs and quality of care provided in the product lines over a period of time will Directors come to realize if they have selected the most qualified product line managers.

### **Selected Product Lines**

Studies of large numbers of private sector facilities that have implemented product line management indicated selected product lines were sometimes based upon grouping ICD-9-CM Codes into clinical groups (Ruffner 1986, 15). Others were based upon medical specialty groups, i.e., ophthalmology or neurology (Patterson 1993, 20), which often became the organizations'

centers of excellence (Naidu, Kleimenhagen and Pillari 1993, 15).

In the forty VAMCs that have implemented product line management, generic product lines have been developed, i.e., ambulatory care and acute care. The previous traditional clinical services (or combinations thereof) have been selected as the product lines. (Refer to Figure 9.) One of these product lines, for example, might bear the same name as one of the Strategic Healthcare Groups implemented in Headquarters by Dr. Kizer (Refer to APPENDIX A, VHA Strategic Healthcare Groups). However, most do not include the same specific services or functions as do the Strategic Healthcare Groups outlined by Dr. Kizer. For example, most acute care product lines identified by the forty VAMCs include the traditional physician-oriented medical and surgical services (generic), whereas the Acute Care Strategic Healthcare Group includes patient care-related specialties (Critical Care, Cardiac Care, Stroke (CVA) Care, Cancer Care, etc.).

### **Scope of Staff Involvement in Implementing Product Line Management**

Researchers have stressed the importance of involving physicians in the planning process (Manning 1987, 32; Nackel and Kues 1986, 113), as well as communicating with all staff about the process (Nackel and Kues 1986, 121; Zelman and McLaughlin 1990, 14). The planning and implementation process utilized by management in the VAMCs has included these groups. In the forty VAMCs that have implemented product line management, management appropriately included the triad and the clinical service chiefs. Slightly more than 50 percent included employees, and 75 percent included unions, which could be interpreted as representing employees. Almost 75 percent of the VAMCs included the medical staff in the process.

### **Product Line Manager Qualifications, Role and Responsibilities, and Fiscal Accountability**

Longshore (1994, 15) warned against promoting a loyal and committed clinical or administrative staff member to product line manager. He stated the product line manager should be a leader who has a background in finance, marketing, strategic planning, and business administration. With this background, the product line manager possesses the skills to successfully perform the necessary operational responsibilities, including defining, planning, and implementing product lines, marketing and advertising services, and monitoring and controlling resource consumption within the product line (Nackel and Kues 1986, 112).

The most common educational preparation of product line managers in the forty VAMCs is a medical degree. Such a degree usually does not include a business background. The majority of the product line managers in the forty VAMCs are previous chiefs of service or ACOSs, which implies they have managerial experience. However, it does not imply that they have experience in business-related functions that are required for successful product line management. Perhaps a limitation of the survey was that Directors were not asked to describe the training provided, or planned for, product line managers in preparation for full accountability of the product line's operations.

Although slightly more than 50 percent of the Directors have given product line managers full fiscal responsibilities, they find the managers resist financial accountability. Since federal regulations prohibit VAMCs from marketing the provided services, product line managers cannot perform some of the responsibilities described in the literature. Many of the product line managers have an administrative staff member who manages and monitors the daily operations.

Only after monitoring the productivity, costs, and quality of care for at least three years will the Directors be able to determine the success of their selected product line managers.

### **Identified Problems**

VAMCs have also mixed product line management with a matrix-type organizational structure and integrative approaches to reorganizing administrative services. This blurring of the definition of product line management makes comparisons between VAMCs difficult. To fully compare one with another, one would need to begin by conducting a thorough review of the organizational structure of each VAMC. However, such an assessment was beyond the scope of this study.

Reorganizing the administrative, functional services has been more problematic than any other factor in the forty VAMCs. They have also experienced many of the other limitations described in the literature, such as resistance to change and insufficient information systems. They most likely have not experienced increased administrative costs due to the fact that most product line managers are existing VHA employees who were previously in positions requiring higher salaries.

### **Identified Benefits**

Some of the surveyed VAMCs have realized most of the benefits described in the literature. Many have realized reduced duplication of services and other factors that may eventually reduce the cost of providing services. However, the majority of the forty Directors admit that it is too early to tell if benefits will be long-lasting. The VAMC Director Survey should be repeated in one year and three years to identify the long-term benefits for implementing



product line management in these forty VAMCs.

### **Product Line Management Experiences in Two VAMCs**

In order to fully utilize the survey information in developing alternative approaches for implementing product line management in the STVHCS, a closer review of those VAMCs that had experienced it for thirteen or more months was conducted. Nine VAMCs met that criterion - eight had thirteen to twenty-four months product line experience, and one had more than twenty-four months experience. It was felt that if any of those VAMCs' scopes and complexities of services and bed sizes were similar to the STVHCS, an analysis of specific survey data and other information (organizational charts and project plans) provided by those Directors could be beneficial.

Of the eight VAMCs that had thirteen to twenty-four months' product line management experience, four had 0-200 operational beds, and two had 201-400 operational beds. It was felt that these VAMCs could not be compared to the STVHCS, since it has 401-600 operational beds. Only one of the eight had 401-600 operational beds, but the scope and complexity of services provided were primarily psychiatric and domiciliary services. Therefore, since the STVHCS provides a full range of clinical services, it was not felt that the experiences of that VAMC could be most beneficial to this study. The eighth VAMC that had thirteen to twenty-four months' product line management experience has a similar scope and complexity as those in the STVHCS. The one VAMC with more than twenty-four months' experience has been successful. Therefore, these last two VAMC surveys and additional information provided by the two Directors were reviewed carefully.

### VAMC (A)

VAMC (A) (an integrated multi-facility health care system) is a 1001 plus operational-bed system where product line management has been in place for thirteen to twenty-four months. Even though the bed size is greater than the STVHCS, it was felt that VAMC (A)'s experiences and approaches to product line implementation were significantly important to this study for the following reasons. VAMC (A) and the STVHCS are both in VISN 17. VAMC (A) provides similar clinical services to those provided by the STVHCS and is affiliated with graduate medical education programs. If the VISN Director were to make the decision to implement VISN product lines, the same product lines would subsequently be implemented in each VAMC in the VISN. Such a VISN-wide reorganization would allow a comparison of product line performance across facilities. One might speculate that if VAMC (A) has had product line management success, the VISN Director would likely adopt the same product lines in the VISN.

VAMC(A) implemented product line management during a merger with two other VAMCs, and it changed the mission of one of its merged facilities to the provision of Extended Care services only. The driving forces of the merger and partial mission change were to improve the quality of care, to restructure the organization, to respond to expressed veteran needs, and to better coordinate the progression of care.

VAMC (A) identified six product lines: Primary Care, Mental Health and Behavioral Sciences, Tertiary and Diagnostic Care, Long Term Care, Education, and Research. Product line managers are supported by the Associate Director for Operations and the Associate Director for Patient Services. Many traditional clinical and administrative services were integrated and report to the two Associate Directors. (Refer to APPENDIX L, Master Concept Organizational Chart:

VAMC (A).) The implemented, product line approach could be classified as service-oriented with matrixed and integrated services reporting to traditional top management. The managers are physicians each of whom was previously the chief or ACOS of his or her respective areas. They report to the Board of Directors, which includes senior leaders from each of the three merged facilities.

The Director indicated that no problems were encountered in the implementation process. He attributed this to the fact that he followed a strategically planned, product line communication program. He stressed the absolute importance of frequent and consistent communication with all stakeholders during the implementation process. The Director stated that the facility has realized all benefits listed on the survey, except decreased costs. This may be due to the fact that it has a large long term care psychiatric population, patients known to frequently require several months hospitalization.

#### VAMC (B)

VAMC (B) has 601-800 operational beds and is affiliated with graduate medical education programs. However, clinical services provided are not as complex as those in the STVHCS. VAMC (B)'s relevance to this study is the fact that it is the only participating VAMC that implemented product lines more than two years ago, and implementation has been successful. The primary driving forces were to improve the quality of care and to reduce costs and duplication of services.

VAMC (B)'s selected product lines include Ambulatory Care, Long Term Care, Geriatrics and Extended Care (GRECC) (100 bed Alzheimer's Unit), and Psychiatry. Each product line is called a process improvement council or PIC. All product line managers are physicians, each of

whom was previously the chief or director (GRECC) of his or her respective service. They report to the Quality Management Board, which consists of the Director, Associate Director, Associate Director for Clinical Services, Chief of Staff, Administrative Assistant to the Chief of Staff, the Chiefs of HRM and Fiscal Services, and the Quality Management Coordinator.

Other than the traditional MAS unit clerks and Nutrition and Food Service's registered dietitians being assigned to the clinical product lines, it does not appear that any administrative services have been reorganized along product lines. (Refer to APPENDIX M, Organizational Chart: VAMC (B).) The approach used could be classified as service-oriented with product line structures matrixed over existing traditional services.

The Director stated there has been resistance by product line managers (and teams) in assuming financial responsibility for the product lines because the data from existing information systems are too old to act upon. He anticipates positive changes with the implementation of the Decision Support System or DSS. Other problems encountered during the product line implementation process were the following: reorganizing functional services; defining product line management; resistance by physicians, administrative, and clinical employees; and the time involved in the process. However, the Director stated that all benefits listed in the survey and been realized.

In summary, the strategic orientation and decentralization approaches utilized to implement product line management, thus far, in the VHA system are more traditional and service-oriented than in the private sector. The VAMCs organized around product lines differ primarily in the alignment of the clinical services under the specific product lines. However, the experiences with problems, benefits, product line managers, and the planning and implementation

process in the VHA system are quite similar to those in the private sector, and can be applied to the STVHCS.

### **Phase 2: Assessment of the STVHCS Management Style and Operations**

The purpose of Phase 2 was to assess the management style and operations of the STVHCS. This was accomplished by obtaining a description of the key managerial personnel's perceptions about six questions related to product line management and by reviewing the existing organizational chart and strategic planning document. Comparing this information with the literature, alternative approaches to implementing product line management were developed.

### **The Envisioned Product Line Management Organizational Structure**

Based upon the responses by the STVHCS management personnel, as described in Chapter 3, the researcher concluded that they, in general, believe a combination of a service-oriented matrix approach and a traditionalist approach to product line management may be beneficial in clinical services. They described a structure similar to those that have been implemented in many of the forty VAMCs surveyed, which are also service-oriented matrixed approaches on top of the traditional triadic management system. There were mixed opinions about what clinical product lines should be implemented. Some believe the existing product lines are appropriate; some believe the Strategic Healthcare Groups should be implemented; and one described three other product lines. As stated in the literature review and as implied in the above discussion about the forty VAMCs' product line management structures, the STVHCS management staff members hold differing definitions of product lines and product line management.

Even though the managerial staff offered suggestions for integrating administrative services, there were more questions than opinions about reorganizing these services along product lines. Concerns included the cost of another layer of management, how administrative support services would be aligned within the product lines, and the lack of necessary managerial and business skills of those who may be selected as product line managers and those who may be assigned to assist the managers.

### **Anticipated Problems and Expected Benefits in the STVHCS**

The problems the STVHCS managerial staff anticipate are very similar to those described in the literature and by the forty, surveyed Directors that have implemented product line management. As discussed in Chapter 3, the anticipated problem that is different than those experienced in the private sector relates to functions currently performed by MAS. This problem is the loss of employee expertise regarding VHA regulations, eligibility and legal issues, data validation, MCCR, and fee basis. It is perceived that there will be very few employees, if any, who will have the necessary expertise to fully train future employees. This problem has occurred in a few of the forty VAMCs that have reorganized all functional services along product lines. This trend suggests that the STVHCS should take proactive steps to thoroughly review all functions in all services during the planning and implementation process to be certain there is consistency in maintaining the necessary functions in the different product lines.

The STVHCS managerial staff is also concerned that product line managers with the necessary training, skills, and expertise are not available within the organization. This suggests a need for educational programs to “retrain” current managers in the skills necessary for successful

performance if resources are not available to recruit individuals who currently possess the needed business skills.

Many of the managerial staff expressed opinions about turfdom, chaos and confusion, and resistance to change. At the same time, they also identified the breakdown of self-imposed, internal organizational barriers and improved teamwork and synergy as expected benefits of product line management. The concerns could be minimized and benefits could be realized by developing a product line communication plan, as previously described in the literature review and as stressed by the Director of VAMC (A). While some expressed a concern about insufficient information systems, this should be minimized within the next two years when the decision support system, or DSS, is fully operational.

The need for quality management/risk management and fiscal service representation in the STVHCS product lines, whether reassigned or matrixed, is evidenced by management's expectation of benefits resulting from product line management (reduced costs, improved customer satisfaction, and improved quality of care). It will be critical to have ongoing monitoring of identified performance measures in each product line.<sup>9</sup> One interviewee made the statement that clinicians sometimes become less efficient (resulting in increased costs for increased numbers of services) while attempting to improve the quality of care. Quality management and fiscal monitoring would bring such problems to the clinicians' attention, which would hopefully result in a change in practice.

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<sup>9</sup>Dr. Kizer has identified performance measures that will be utilized to evaluate the performance of all VISN Directors. The VISN Directors, in turn, have placed facility Directors on the same performance plan.

### **Qualifications, Roles, and Responsibilities of the Product Line Manager**

The majority of those interviewed believe the product line managers (or team) should report to one or more members of the triad. Like the forty VAMC Directors that have implemented product line management, the STVHCS managerial staff believe the managers should have the experience and scope of responsibility of an Associate Director or Chief of Staff and should accept full responsibility for all product line operations. Those that are of the opinion that the product line managers should be lead clinicians (physicians) also expressed concerns that some lead clinicians, and the administrative officers that would potentially be assigned to work with them, lack the necessary business knowledge, skills and political acumen to successfully meet the performance requirements. This could be remedied by one of two actions: providing the clinicians and administrative officers with the necessary training, or seeking out other applicants that have the required qualifications.

Not all of the managerial staff interviewed believe the product line manager has to be a physician. They believe a nurse, administrative officer, or another staff member with the necessary qualifications could fill the role. The ideal personal qualities of the product line manager identified by the STVHCS managerial staff (being approachable, flexible, respected, open-minded, etc.) are consistent with what the literature describes as good social standing (Zelman and McLaughlin 1990, 14).

### **Should the STVHCS Implement Product Line Management?**

This was probably the most important question asked of the STVHCS managerial staff members. There is a very strong sense of commitment and loyalty to the Director and to



providing the highest possible quality of care to the veteran population. They also expressed great concern and hesitancy about implementing product line management if the VISN is not supporting the initiative and implementing VISN product line management. Only four of those interviewed believe it should be implemented. However, the lack of a "yes" or "no" response by five of those interviewed opens the door for innovative and creative thinking.

The culture of the STVHCS has been one of team work, involving all levels of employees, with the ultimate goal of building and maintaining one of the most progressive VAMCs in the VHA system. It is evident by the interview responses that the managerial staff members would want to and should be included in selecting the product lines. They should actively participate in a product line management strategic planning and implementation process if top management makes the decision to go forward with this approach. As described in the literature and expressed by the Directors of VAMCs (A) and (B), the resistance to organizational change, and the chaos and confusion associated with that change, can be minimized by continuous and consistent communication with all staff members and by involving them in the planning and implementation process.

In summary, perceptions about product line management and opinions of whether to and how to reorganize around product lines vary among key STVHCS managerial personnel. Perhaps, rather than using the phrase "resistant to such change," one might state that management has chosen to move cautiously and wisely, exploring all possible ramifications of such an organizational re-engineering strategy. A combination of the service-oriented and traditional approaches to product line management matrixed on top of the traditional triad would be the most appropriate strategy in this climate.

## **Document Reviews**

The purpose of reviewing the selected documents was to determine the existence of goals and objectives that might suggest a product line management approach to health care delivery. In the "Prescription for Change," Dr. Kizer identified the implementation of clinical service lines as one action that could be taken to reduce the cost of health care in the VHA (Kizer March, 1996).

### *VISN 17 Heart of Texas Veterans Healthcare Network Mission and Strategic Goals and Objectives*

The VISN 17 mission statement states that health care services are provided to veterans through an integrated delivery system. (Refer to APPENDIX I, Mission - Vision - Values.) The phrases "integrated healthcare system" and "integrated delivery system" are used frequently in the "Network Plan FY 1997 - FY 2001." Neither of them is clearly defined. The phrase, "integrated healthcare system," refers to the integration of separate VAMCs into a new entity, e.g., one of the three integrated Systems in VISN 17<sup>10</sup>, and to the subsequent realignment of clinical and administrative services (Heart of Texas Veterans Healthcare Network 1996, IX-8 - IX-11).

The phrase, "integrated delivery system," is clarified somewhat by the statement that "the Network will operate as an integrated delivery system with a focus on re-engineering the operational and management structures of its healthcare facilities" (Heart of Texas Veterans Healthcare Network 1996, II-2). There is a major thrust to greatly expand the outpatient programs and reduce the inpatient programs in each of the three systems within VISN 17. The

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<sup>10</sup>Over the past two years, seven VAMCs in VISN 17 have integrated to form three Veterans Healthcare Systems. The Audie L. Murphy Memorial Veterans Hospital (and five satellite clinics) merged with the Kerrville VAMC to form the STVHCS. The Temple, Marlin, and Waco VAMCs merged to form the Central Texas Veterans Healthcare System. The Dallas and Bonham VAMCs merged to form the North Texas Veterans Healthcare System. Each of the seven VAMCs are referred to as Divisions of their respective Systems.

VISN cites expanding ambulatory surgery and invasive diagnostic procedure capacity and decreasing bed days of care (inpatient to outpatient) as two strategies for accomplishing this integrated delivery system. Each of the two strategies requires collaboration by staff members of all services to streamline operations and re-engineer existing systems. Reorganizing along product lines could be considered by managerial staff members as an action plan for accomplishing these two strategies. Product line management has not only been implemented in an effort to reduce the cost of health care; it is also considered a transitional, management approach for those organizations moving from an inpatient environment to an outpatient environment (O'Malley, Cummings, and Serpico 1991, 9). It includes the realignment of staff members from several functional services to a product line team that becomes focused on improving and streamlining existing processes.

The literature describes three approaches to organizational integration. All include the development of product lines (Charns 1996). One of the approaches could be applied to the VISN level. It eliminates all strategic management functions at the facility-level and replaces them with "system" product lines managed by "system," product line directors. This implies the elimination of one or all positions in the traditional VAMC triad. The other two integrative approaches apply more directly to individual hospitals. The approach where product line teams cut across services and facilities could be considered one, or a combination, of the three previously discussed decentralization approaches: traditionalist, service-oriented, and market-oriented. It could be applied to any of the forty surveyed VAMCs, as well as the STVHCS.

VISN 17 identified five product lines to be implemented in each of its three integrated systems. They include primary care, acute care, mental health, physical medicine and

rehabilitation medicine (PM&R), and geriatrics/extended care. However, there are no plans to implement product lines at the VISN level, as evidenced by the following statements:

These service lines will be implemented within each of the three health systems with no immediate plans to implement network level service lines or service line managers. Deferral is based on uncertainty over private sector applicability to VA given interfacility distance factors, limitations associated with remote managerial control, and undocumented benefits from network pilots underway. Network level service lines and service line managers require further study before plans towards implementation are developed by the Network (Heart of Texas Veterans Healthcare Network 1996, I-2).

There are seven Network Mission Goals with corresponding objectives. (Refer to APPENDIX N, Heart of Texas Veterans Healthcare Network Mission Goals and Strategic Objectives.) The goals and objectives are based upon those stated in Dr. Kizer's "Prescription for Change." Some of them imply that a product line management organizational structure would be appropriate in each of the VAMCs. In general, the VISN goals and objectives include actions that should reduce and control costs, improve efficiency in all areas, and prepare employees and other stakeholders for a changing VHA managed care environment. Reducing and controlling costs and improving the organization's efficiency have been cited as benefits of product line management (Frackelmann 1985, 70; Goodrich and Hastings 1985, 157; Lowe 1987, 9-10; and Studnicki 1991, 68-69). Some of the forty surveyed VAMC Directors stated they have realized improved efficiencies and reduced costs as a result of product line management (APPENDIX J, Results of Mail Survey of VAMC Directors).

#### STVHCS Organization Chart and Mission, Vision, and Values Statements

The current STVHCS organization chart reflects a traditional triadic management structure. (Refer to APPENDIX O, STVHCS Organizational Chart.) The mission statement speaks to the four longstanding missions of the VHA system. The established values do not refer

to product line management. The vision statement describes actions that could be supported by a product line management approach (Refer to APPENDIX I, Mission - Vision - Values.) Phrases and words such as empowered workforce, center of excellence, efficient, and cost effective are used in the product line management literature.

The VISN's internal assessment of the facilities' missions describes the STVHCS San Antonio Division as becoming increasingly specialized in acute diagnosis and therapeutic services, with the Kerrville Division focusing on primary care and extended care. The only reference to product lines in the internal assessment of the STVHCS mission is the statement that expanded service lines have been established for CHAMPVA, TRICARE, and DoD active-duty beneficiaries (Heart of Texas Veterans Healthcare Network 1996, III-3).

In summary, facility-specific product lines have been established by the VISN, even though the VISN has not implemented product line management. The VISN strategic plan serves as the plan for all three Systems and includes strategic goals and objectives that, based upon the literature review, could be enhanced by product line management. The plan is for the focus of the STVHCS's Kerrville Division to be primary care and extended care. The two services could potentially become "centers of excellence." The literature suggests product line management can assist facilities in developing "centers of excellence" (MacStravic 1986, 36-38). The STVHCS vision could easily support a product line management approach.

## **CHAPTER 5**

### **CONCLUSIONS AND RECOMMENDATIONS**

#### **Conclusions**

Based upon a comparison of the information from the literature read with information obtained from the VAMC Director Survey and the assessment of the STVHCS's management style and operations, three alternative approaches to implementing product line management in the STVHCS were developed. Of course, a fourth option would be to do nothing.

Should the STVHCS implement product line management? It has been a successful proactive organization for many years in the current structure. However, with the rapidly changing VHA environment, the strategies that have worked for so long could become a detriment to the STVHCS's continued success. The worst case scenario would be for someone (or authority figure/group) outside the organization to try to impose a specific management structure upon the STVHCS.

Given the past and present proactive and innovative cultural environment in the STVHCS, the following three approaches to implementing product line management have been developed for top management's consideration. All three are primarily of the service delivery (effectiveness of care delivery) strategic orientation, with some elements of the planning and marketing (business plans) and budget and control (determine, reduce, and control costs) orientations. This service

delivery strategic orientation was well-justified in Chapter 4.

### **Alternative Approach A: Traditional/Integrated**

The traditional, integrated approach to decentralizing around product lines best fits the traditionally managed organization that is resistant to change. All services would remain intact, and product lines would be imposed on top of them. Representatives from various services would be matrixed-out to the product lines, but their services would remain responsible for their performance in the product lines. (Refer to APPENDIX P, Organization Chart: Alternative Approach A.)

The identified benefits of Approach A include the following:

- ☐ It would "fit" the current organizational structure and cultural environment.
- ☐ It is a simple and straight forward design.
- ☐ There would be less resistance to change by staff because many services already have staff matrixed out to clinical programs.
- ☐ Approach A could serve well as the transitional model to a more structured decentralized approach.

The limitations of Approach A include the following:

- ☐ The product line manager would not have control over the team members' activities.
- ☐ It does not address the administrative responsibilities to the product lines.
- ☐ It places another management layer over services and operations.
- ☐ There would not necessarily be a reduced duplication of services provided in the organization.
- ☐ It would be more difficult to track the specific costs of each product line.

### **Alternative Approach B: Service-Oriented/Traditional**

A combination of the service-oriented approach and the traditional approach is evident in many of the forty surveyed VAMCs, including the one other VISN 17 System (VAMC (A)) discussed in Chapter 4. Only clinical services are involved in the restructuring, as illustrated in APPENDIX Q(1), Organization Chart: Alternative Approach B(1), and APPENDIX Q(2), Organization Chart: Alternative Approach B(2). Alternative Approach B(2) suggests the possible alignment of clinical services under each product line. A replication of APPENDIX L could also serve as an organizational chart for Approach B. This would align the STVHCS product lines with another System in VISN 17. However, it would increase the number of product lines and add an Associate Director for Patient Services.

The benefits and limitations of Approach B include:

- ☐ The approaches permit the organization to retain its triad management structure and still reap some of the benefits of product line management - improved efficiency and effectiveness (Zelman and Parham 1990, 33).
- ☐ Dependent upon how top management decides to realign services under the product lines, reduced personnel costs may or may not be realized with a reduction in chief or assistant chief positions (APPENDIX K, Results of STVHCS Key Management Interview).
- ☐ It would be easier to track product line costs in this approach (Manning 1987, 29), particularly when the decision support system, or DSS, is fully operational.
- ☐ Since so many of the STVHCS clinical services' staff are already functioning in a matrix-type role, there would be less resistance to this approach (APPENDIX K, Results of STVHCS Key Management Interview).



To prevent or minimize any resistance and assist the organization in the transition period, education and communication plans should be implemented. Educating physicians and involving them in aligning clinical services in the product lines will be crucial to successful implementation. It would be important to maintain systems and processes whereby staff credentialing, certification, and competencies are monitored. Currently, each traditional service is responsible for these functions i.e., for nurses, physicians, respiratory therapists, and pharmacists. Some of the STVHCS key managerial staff members are concerned that, if staff are aligned along the product lines rather than matrixed-out to the product lines, the product line managers will not have the expertise in all professions to adequately monitor and evaluate the credentialing, certification, and competencies (APPENDIX K, Results of STVHCS Key Management Interview).

#### **Alternative Approach C: Service-Oriented/Traditional with Integration of Administrative Services**

Approach C is the same as Approach B, except that some of the administrative services are integrated into administrative or business product lines. This approach would further streamline operations and reduce administrative overhead. The suggested realignment of the administrative services is based primarily upon interviews with the STVHCS managerial personnel. (Refer to APPENDIX R, Organization Chart: Approach C.)

If Approach C were implemented, product line staff may unknowingly take illegal actions related to VHA eligibility determinations and actions involving fiscal and HRM regulations. It is perceived that there will be very few employees, if any, who will have the necessary expertise to fully train future employees about these regulations (APPENDIX K, Results of STVHCS Key Management Interview). To minimize this problem, an in-depth analysis of the current key

functions of each administrative service must be conducted to assure they remain intact in the new organizational structure. Appropriate training of any staff who will assume these functions must be planned.

The reorganization of administrative services along product lines and the integration of administrative services are not perceived by most STVHCS managerial personnel as the best strategy for preparing to enter into the new millennium. If management decides to implement Approach C, administrative staff should actively participate in the planning and implementation process. Top management should develop education and communication plans to keep all employees abreast of current and foreseeable events.

#### **Recommendations: The "Best Fit"**

Approach B "best fits" the current STVHCS management style and operations. It is also consistent with other VAMCs' experiences with product line management. It would be a more proactive strategy than Approach A and could serve as a transitional model for reorganizing administrative services.

The STVHCS should begin by implementing product line management in one clinical service, such as the Geriatrics & Extended Care Service or the Spinal Cord Injury Service, that has had experience with the matrix-management concept. Any resistance and confusion among the product line members would be further minimized by such a beginning. Both services have relatively few physicians and house staff, which would limit the problem of GME, frequently rotating house staff until the STVHCS has more experience in the product line management approach. After six months, provided any operational problems are resolved, the second product

line (the Geriatrics & Extended Care Service or the Spinal Cord Injury Service) should be implemented.

The mission and vision statements need to reflect product line management before management decides to implement it. Strategic planning groups should be formed to revise the STVHCS's mission and vision statements that clearly reflect product line management. The roles, responsibilities, and authority of the product line manager and the organization should be fully defined. Utilization review, quality management, and product line fiscal monitoring plans must be developed. Educational programs for the product line manager and team members should be implemented. Ongoing planning meetings with top management should be held to assure the product line's goals and objectives remain consistent with those of the organization, and to monitor the product line's effectiveness and efficiency.

### **Study Limitations**

Several limiting factors existed that may have impacted the study results, including the following:

- ✧ The researcher had no control over who actually completed the VAMC Director Survey.
- ✧ Twenty-seven Directors did not respond to the survey.
- ✧ Most of the VAMCs that are organized around product lines have six months or less experience, which could have falsely influenced some of the Directors' (designees') responses.
- ✧ Time constraints did not permit a site visit to any VAMC organized around product lines to conduct a thorough assessment of the organizational approach implemented.

- ✧ Not all of the STVHCS managerial staff were interviewed due to time constraints in completing the study.
- ✧ A few of the STVHCS managerial staff interviewed did not seem to have sufficient product line management knowledge to provide valid responses.
- ✧ Researcher bias may have influenced the “best fit” recommendation.

### **Future Implications**

Further longitudinal studies on product line management implementation in the VHA system should be conducted. The VAMC Director Survey (Phase 1) should be repeated at set intervals to study the long term impact of product line management and the different approaches being implemented. Information obtained from the survey process could be beneficial to all VAMC Directors in the product line management implementation decision-making process. The interview process (Phase 2) could easily be replicated in a VAMC that is considering implementing product line management. In order to be more thorough and meaningful, all service chiefs should be interviewed.

### **Summary**

A descriptive qualitative study was conducted to develop alternative approaches to implementing product line management in the STVHCS. Forty VAMC Directors provided information about their experiences in implementing product line management, and selected STVHCS management personnel shared their perceptions and opinions about product line management within the System. Based upon this information, three alternative approaches were developed, and one of them--a service-oriented, traditional approach-- was recommended as the “best fit.”

The VHA system, influenced and affected by the rapidly changing health care industry, has reorganized into a complex managed care system driven by the need to reduce costs, improve the quality of care delivered, and improve the veteran's access to care. The implementation of product line management in the VHA system is one approach to controlling costs. Only with further experience and study of the VAMCs organized around product lines will the full effects of this approach be known.

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# APPENDIX A

## VHA STRATEGIC HEALTHCARE GROUPS

**Office of Patient Care Services (11)**  
 Thomas V. Holohan, M.D. FACP  
 Chief PCS Officer

<b>Allied Clinical Services (110)</b> Bernice P. Dorse, RD Chief Consultant  Medical Nutrition Therapy Psychosocial Treatment Spiritual/Religious Care	<b>Acute Care (111)</b> Gabriel O. Manasse, M.D. Chief Consultant  Critical Care Cardiac Care Stroke (CVA) Care Cancer Care Pain Management Organ Transplantation	<b>Primary &amp; Ambulatory Care (112)</b> Ronald J. Gebhart, M.D. Chief Consultant  Eye Care Dental Care Foot Care Spinal Cord Injury Care* Health Promotion & Disease Prevention	<b>Prosthetic &amp; Sensory Aids Services (113)</b> Frederick Downs, Jr. Chief Consultant  Assistive Aids Prosthetic/Orthotics Surgical	<b>Geriatrics &amp; Extended Care (114)</b> Judith A. Salerno, M.D. Chief Consultant  Community-Based Long Term Care Nursing Home Care Geriatric Care Residential Rehab Care Cross-Cutting Functions
<b>Diagnostic Services (115)</b> Theodore F. Beals, M.D. (Acting) Chief Consultant  General Diagnostics Services Invasive Procedures Therapeutic Services Tele-Imaging Women's Program Services Accreditation/Inspection Health Physics/Radiation Safety	<b>Mental Health (116)</b> Thomas Horvath, M.D. Chief Consultant  Serious Mental Illness PTSD Addictive Disorders Homelessness Psychosocial Rehabilitation Geropsychiatry	<b>Rehabilitation (117)</b> Leigh Anderson, M.D. (Acting) Chief Consultant  Blind Rehabilitation Audiology/Speech Pathology National Recreation Therapy Programs Traumatic Brain Injury Rehabilitation Neuro/Stroke Rehabilitation PACT Musculo/Skeletal Rehabilitation Pain Management Psychosocial Rehabilitation	<b>Nursing (118)</b> Nancy Valentine, RN, Ph.D., MPH Chief Consultant  Nursing Programs Management Collaborate and Support Strategic Healthcare Groups in Patient Care Services and VISNs	<b>Pharmacy (119)</b> John Ogden, M.S. Chief Consultant  Pharmacy Benefits Management VISN Support and Virtual Relationship with other SHGs

\*In October, 1996, a Spinal Cord Injury Strategic Healthcare Group (SHG) was created, making a total of 11 SHGs in Patient Care Services  
 Source: Holohan, Thomas V., M.D., FACP. Letter and Attachment B to the Chief Patient Care Services Officer, "Strategic Healthcare Groups," dated July 26, 1996.

## **APPENDIX B**

### **ANALYSIS OF CONDUCTED RESEARCH**

The researchers' analysis of the profile of hospitals implementing product line management, and the impact of product line management on operations is summarized in their developed propositions, as follows:

- \* The likelihood of an organization adopting product line management increases with bed size.
- \* Urban hospitals serving populations of 200,000 or more have a higher likelihood of implementing product line management than do rural or smaller community hospitals.
- \* Urban hospitals facing intense competition tend to adopt product lines in order to manage their costs more effectively and respond quicker to the changing needs of their customers.
- \* Higher net income per bed is associated with hospitals implementing product line management, but no "cause-and-effect" relationship was established from the analysis.
- \* Gross revenue per bed tends to be higher for hospitals that have implemented product line management.
- \* The percent of revenue derived from Medicare, Medicaid, and HMO/PPO is independent of hospitals' product line management implementation.
- \* Product line management is associated with increased marketing staff.
- \* Product line management is associated with higher hospital budgets allocated to marketing, public relations, and planning activities.
- \* Hospitals with product line management had an average of 15.9% return on equity as compared to 7.1% for the hospitals that did not employ product line management.
- \* Each product line for each hospital was rated on level of focus (primary, secondary, no focus), utilization, and profitability, revealing the higher the combined score for each product line, the greater the net income per bed. This implies that building excellence in product lines generates higher income leading to greater profitability.
- \* Hospitals employing product line management seem to be more market-oriented than those that do not implement product line management.
- \* Product line management and salary-to-revenue ratio are independent, which does not support the widely believed assumption that product line management adds another layer of management and increases administrative expense (Naidu, Kleimengahen and Pillari 1993, 14-16).

## APPENDIX C

### MAIL SURVEY OF VAMC DIRECTORS

**INSTRUCTIONS:** Product line management, service line management, and patient focused teams are often used synonymously in health care to describe an organizational approach to improving quality of care and decreasing costs. For purposes of this survey, the term Product Line Management (PLM) is used. This survey is being sent to all VAMC Directors. It should take approximately thirty minutes of your time. **To ensure confidentiality, you will remain anonymous unless you respond YES to question 10 or 23.** Your participation will provide information about PLM implementation across the Veterans Health Administration (VHA) system. When you complete the survey, please return it in the enclosed self-addressed envelope by **December 15, 1996**. **THANK YOU.**

1. How many beds are operational in your facility? (Mark only one.)

- ☐ 0 - 200
- ☐ 201 - 400
- ☐ 401 - 600
- ☐ 601 - 800
- ☐ 801 - 1000
- ☐ 1001 or more

2. What clinical services are provided in your facility? (Mark all that apply.)

- |   |   |
|---|---|
| <input type="checkbox"/> Ambulatory Care    | <input type="checkbox"/> Surgical Service       |
| <input type="checkbox"/> Medical Service    | <input type="checkbox"/> Mental Health          |
| <input type="checkbox"/> Substance Abuse    | <input type="checkbox"/> Long Term Care         |
| <input type="checkbox"/> Domiciliary        | <input type="checkbox"/> Operating Room         |
| <input type="checkbox"/> Dialysis           | <input type="checkbox"/> Bone Marrow Transplant |
| <input type="checkbox"/> Organ Transplant   | <input type="checkbox"/> Rehabilitation Service |
| <input type="checkbox"/> Spinal Cord Injury | <input type="checkbox"/> Acute Care             |
| <input type="checkbox"/> Dental Service     |   |
| OTHER (please specify) _____                |   |

3. Does your facility have affiliations with graduate medical education (GME) programs (housestaff)?

YES \_\_\_\_\_ NO \_\_\_\_\_

4. Are you familiar with the term Product Line Management (PLM)? YES \_\_\_\_\_ NO \_\_\_\_\_

5. If so, how did you hear about PLM? (Mark all that apply.)

- |   |   |
|---|---|
| <input type="checkbox"/> Health care literature   | <input type="checkbox"/> Seminars/conferences         |
| <input type="checkbox"/> School                   | <input type="checkbox"/> Colleagues                   |
| <input type="checkbox"/> VISN communication       | <input type="checkbox"/> Central Office communication |
| <input type="checkbox"/> Manufacturing literature |   |

6. Have you implemented PLM in your facility? YES \_\_\_\_\_ NO \_\_\_\_\_

(If you responded YES to question #6, skip to question #11. If you responded NO to question #6, please complete questions 7 through 10 only.)

7. Are you currently planning to implement PLM in your facility? YES\_\_\_\_\_ NO\_\_\_\_\_

8. What do you perceive the reasons for not implementing PLM in your facility? (Mark all that apply.)

\_\_\_\_\_ Do not know enough about PLM to make a decision

\_\_\_\_\_ Resistance by administration

\_\_\_\_\_ Resistance by medical staff

\_\_\_\_\_ Resistance by employees

\_\_\_\_\_ Too expensive to implement

\_\_\_\_\_ Do not have a sufficient information systems to support PLM

\_\_\_\_\_ Current organizational structure is effective and efficient

OTHER (please specify) \_\_\_\_\_  
\_\_\_\_\_

9. Would you like to know more about PLM? YES\_\_\_\_\_ NO\_\_\_\_\_

10. Would you like a copy of the results of the survey? If yes, please provide your name and location.

YES\_\_\_\_\_ NO\_\_\_\_\_

NAME: \_\_\_\_\_

ADDRESS: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**THANK YOU. YOUR ANSWERS ARE IMPORTANT. STOP HERE IF YOU ANSWERED NO TO QUESTION #6. PLEASE RETURN THE COMPLETED SURVEY IN THE ENCLOSED SELF-ADDRESSED ENVELOPE. SHOULD YOU HAVE QUESTIONS, PLEASE CONTACT: SANDRA SEEMAN, CHE (182), U.S. Army-Baylor Administrative Resident, TELEPHONE: 210-617-5197 (WORK); FAX 210-617-5312.**

11. How long has your facility been organized using a PLM approach? (Mark one.)

\_\_\_\_\_ Less than 6 months

\_\_\_\_\_ 7 months to 12 months

\_\_\_\_\_ 13 months to 24 months

\_\_\_\_\_ Greater than 24 months

12. Why did you implement PLM (driving forces) in your facility? (Rank the following responses in order of priority, with 1 indicating the strongest reason and 10 or more indicating the weakest.)

\_\_\_\_\_ To reduce costs

\_\_\_\_\_ To control costs

\_\_\_\_\_ To reduce bed days

\_\_\_\_\_ To improve the quality of care

\_\_\_\_\_ To reduce bed days

\_\_\_\_\_ To reduce duplication of services

\_\_\_\_\_ Response to expressed veteran needs

\_\_\_\_\_ To restructure the organization

\_\_\_\_\_ To reduce the average length of stay (ALOS)

\_\_\_\_\_ Directed to do so by superiors

OTHER: (Please specify) \_\_\_\_\_

13. Selected product lines in your facility are based upon: \_\_\_\_\_ VISN product lines; \_\_\_\_\_ facility specific product lines; or \_\_\_\_\_ both. (Mark the most appropriate choice.)

14. In what areas have you implemented product lines (PLs) in your facility? (Mark all that apply.)

- |                                  |                        |
|----------------------------------|------------------------|
| _____ Ambulatory Care            | _____ Operating Room   |
| _____ Acute Care                 | _____ Medical Services |
| _____ Surgical Services          | _____ Mental Health    |
| _____ Substance Abuse            | _____ Long Term Care   |
| _____ Rehabilitation Service     | _____ Organ Transplant |
| _____ Bone Marrow Transplant     | _____ Dialysis         |
| _____ Spinal Cord Injury Service | _____ Domiciliary      |
| _____ Dental Service             |                        |

OTHER (please specify): \_\_\_\_\_  
\_\_\_\_\_

15. In what other areas are you considering implementing product lines? (Mark all that apply.)

- |                                  |                        |
|----------------------------------|------------------------|
| _____ Ambulatory Care            | _____ Operating Room   |
| _____ Acute Care                 | _____ Medical Services |
| _____ Surgical Services          | _____ Mental Health    |
| _____ Substance Abuse            | _____ Long Term Care   |
| _____ Rehabilitation Service     | _____ Organ Transplant |
| _____ Bone Marrow Transplant     | _____ Dialysis         |
| _____ Spinal Cord Injury Service | _____ Domiciliary      |
| _____ Dental Service             | _____ None             |

OTHER (please specify): \_\_\_\_\_  
\_\_\_\_\_

16. Who was involved in planning and implementing PLM in your facility? (Mark all that apply.)

- |                               |                                     |
|-------------------------------|-------------------------------------|
| _____ Director                | _____ Medical staff                 |
| _____ Associate Director      | _____ Chief of Staff                |
| _____ Clinical service chiefs | _____ Administrative service chiefs |
| _____ Patients                | _____ Union                         |
| _____ Employees               | _____ Management consultant         |

OTHER (please specify): \_\_\_\_\_  
\_\_\_\_\_

17. a. Have you identified a product line manager for each PL? YES \_\_\_\_\_ NO \_\_\_\_\_

b. Is there more than one product line manager for each PL? *If YES, briefly explain how their roles differ.* YES \_\_\_\_\_ NO \_\_\_\_\_  
\_\_\_\_\_

c. What is the educational preparation of your product line manager(s)? (Mark all that apply.)

- |   |  |
|---|--|
| <input type="checkbox"/> High School Diploma                            | <input type="checkbox"/> Baccalaureate degree      |
| <input type="checkbox"/> Masters degree in public health administration | <input type="checkbox"/> Doctorate                 |
| <input type="checkbox"/> Masters degree in health care administration   | <input type="checkbox"/> Associate degree          |
| <input type="checkbox"/> Masters degree in business administration      | <input type="checkbox"/> Medical degree            |
| <input type="checkbox"/> Degree in an allied health profession          | <input type="checkbox"/> Masters degree in nursing |
- OTHER (Please specify): \_\_\_\_\_

d. What was the product line manager's title prior to PLM implementation? (Mark all that apply.)

- |  |  |   |
|--|--|---|
| <input type="checkbox"/> Chief of Staff                          | <input type="checkbox"/> Chief, Surgical Service                   | <input type="checkbox"/> Chief, Social Work                       |
| <input type="checkbox"/> Chief, Medicine Service                 | <input type="checkbox"/> Chief, Nursing Service                    | <input type="checkbox"/> Chief, MAS                               |
| <input type="checkbox"/> Chief, Fiscal Service                   | <input type="checkbox"/> Chief, Ambulatory Care                    | <input type="checkbox"/> Chief, Psychiatry Service                |
| <input type="checkbox"/> Chief, HRM                              | <input type="checkbox"/> Chief, IRM                                | <input type="checkbox"/> Clinical Nurse Specialist                |
| <input type="checkbox"/> Case Manager                            | <input type="checkbox"/> Administrative Officer                    | <input type="checkbox"/> Associate Director                       |
| <input type="checkbox"/> Assistant Director                      | <input type="checkbox"/> Head Nurse                                | <input type="checkbox"/> Medical Director/LTC                     |
| <input type="checkbox"/> Chief, Spinal Cord Injury Service       | <input type="checkbox"/> Chief, Physical Medicine & Rehabilitation | <input type="checkbox"/> Chief, Dental Service                    |
| <input type="checkbox"/> Chief, Voluntary Service                | <input type="checkbox"/> Chief, Prosthetics Service                | <input type="checkbox"/> Chief, Engineering Service               |
| <input type="checkbox"/> ACOS/Ambulatory Care                    | <input type="checkbox"/> ACOS, Education                           | <input type="checkbox"/> ACOS/Research                            |
| <input type="checkbox"/> ACOS/Extended Care                      | <input type="checkbox"/> Chief, Psychology Service                 | <input type="checkbox"/> Chief, Radiology Service                 |
| <input type="checkbox"/> Chief, Pharmacy Service                 | <input type="checkbox"/> Chief, Police & Security                  | <input type="checkbox"/> Chief, Extended Care                     |
| <input type="checkbox"/> Chief, Environmental Management Service | <input type="checkbox"/> Chief, Nutrition & Food Service           | <input type="checkbox"/> Chief, Acquisition & Material Management |
| <input type="checkbox"/> Chief, Anesthesiology                   | <input type="checkbox"/> Chief, Audiology and Speech Pathology     | <input type="checkbox"/> Chief, Nuclear Medicine                  |
| <input type="checkbox"/> Chief, Pathology & Laboratory Medicine  | <input type="checkbox"/> Administrative service employee           | <input type="checkbox"/> Chief Operations Officer                 |
| <input type="checkbox"/> Medical Director/Bone Marrow Transplant | <input type="checkbox"/> Administrative service assistant chief    | <input type="checkbox"/> Clinical service employee                |
| <input type="checkbox"/> Clinical service supervisor             |  | <input type="checkbox"/> Administrative service assistant chief   |
| <input type="checkbox"/> Clinical service assistant chief        |  |   |
- OTHER: (Please specify) \_\_\_\_\_

e. To whom (title) does the product line manager report? \_\_\_\_\_

18. Are fiscal responsibilities decentralized to the product line manager? YES \_\_\_\_\_ NO \_\_\_\_\_

19. What steps did you take to implement PLM in your facility? (Mark all that apply. *Please enclose any document that may better explain the steps taken.*)

- |   |  |
|---|--|
| <input type="checkbox"/> Organization's mission developed   | <input type="checkbox"/> Organization's vision statement developed   |
| <input type="checkbox"/> Followed consultant's plan         | <input type="checkbox"/> Organization's strategic plan developed     |
| <input type="checkbox"/> PLM education for management       | <input type="checkbox"/> PLM education for medical staff             |
| <input type="checkbox"/> PLM education for all services     | <input type="checkbox"/> Developed PL manager roles & responsibility |
| <input type="checkbox"/> Identified PLs                     | <input type="checkbox"/> Decentralized fiscal factors to PLs         |
| <input type="checkbox"/> Identified organization's PLM role | <input type="checkbox"/> Identified PL manager's authority           |
| <input type="checkbox"/> Developed PL business plans        | <input type="checkbox"/> Developed employee PLM communication plan   |

<input type="checkbox"/> Assessed information systems	<input type="checkbox"/> Piloted one or two PLs initially
<input type="checkbox"/> Developed PL performance measurement plans	<input type="checkbox"/> Implemented or revised information systems
<input type="checkbox"/> Collaborated with VISN Director	<input type="checkbox"/> Collaborated with other VAMCs in the VISN
<input type="checkbox"/> Selected PL manager(s)	<input type="checkbox"/> Developed critical pathways (protocols)
<input type="checkbox"/> PL's mission developed	<input type="checkbox"/> Developed PLM organizational chart
<input type="checkbox"/> Defined PLM in your facility	<input type="checkbox"/> PL's vision statement developed
	<input type="checkbox"/> Reviewed current literature re: PLM approaches

OTHER: (Please specify): \_\_\_\_\_

20. What problems, if any, did you have in implementing PLM? (Mark all that apply.)

<input type="checkbox"/> Resistance by top management	<input type="checkbox"/> Resistance by physicians
<input type="checkbox"/> Resistance by clinical employees	<input type="checkbox"/> Resistance by administrative employees
<input type="checkbox"/> Cost	<input type="checkbox"/> Selecting product line managers
<input type="checkbox"/> Time-consuming	<input type="checkbox"/> Reorganizing functional services
<input type="checkbox"/> Insufficient information systems	<input type="checkbox"/> Defining PLM
<input type="checkbox"/> Patient complaints	<input type="checkbox"/> Selecting PLs

OTHER (Please specify): \_\_\_\_\_

21. What benefits has your facility realized as a result of PLM? (Mark all that apply.)

<input type="checkbox"/> Decreased costs	<input type="checkbox"/> Decreased ALOS
<input type="checkbox"/> Decreased bed days	<input type="checkbox"/> Improved quality of care
<input type="checkbox"/> Decreased waiting times	<input type="checkbox"/> Increased access to care
<input type="checkbox"/> Improved patient satisfaction	<input type="checkbox"/> Improved employee satisfaction
<input type="checkbox"/> Decreased duplication of services	

OTHER: (Please specify): \_\_\_\_\_

22. Would you be willing to share a copy of your organizational chart (approved or draft) reflecting the PLM organizational structure? *If YES, please enclose it in the envelope with the completed survey.*

YES \_\_\_\_\_ NO \_\_\_\_\_

23. Would you like a copy of the results of the survey? *If YES, please provide your name and location.*

YES \_\_\_\_\_ NO \_\_\_\_\_

NAME: \_\_\_\_\_

ADDRESS: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**THANK YOU. YOUR ANSWERS ARE IMPORTANT. PLEASE RETURN THE COMPLETED SURVEY IN THE ENCLOSED SELF-ADDRESSED ENVELOPE. SHOULD YOU HAVE QUESTIONS, PLEASE CONTACT:**

**SANDRA SEEMAN, CHE (182)**  
**U.S. Army-Baylor Administrative Resident**  
**TELEPHONE: 210-617-5197**  
**FAX: 210-617-5312**



Department of  
Veterans Affairs

## Memorandum

Date: November 13, 1996

From: Director, (671/00)  
South Texas Veterans Health Care System, San Antonio, TX 78284

Subj: SURVEY OF VAMC DIRECTORS: Product Line Management Implementation

To: Director (OO)

1. One of Dr. Kizer's strategic objective actions for reducing operating costs is to implement clinical care service lines (or product lines). The literature describes several approaches to implementing Product Line Management (PLM). However, the strategies adopted and the successes and failures you may have experienced are also very important to my decisions about how to best organize the South Texas Veterans Health Care System (STVHCS) along product lines.
2. One of my Administrative Residents is conducting a study to develop alternative approaches for implementing PLM in the STVHCS. One data collection method is through a survey of all VAMC Directors. I request that you complete the attached survey and return it in the enclosed self-addressed envelope by **December 15, 1996**. It should take no more than thirty minutes to complete. The study results should be of benefit to you, also, as you outline strategies plans for reorganizing your organization. To ensure confidentiality, you will remain anonymous unless you desire a copy of the study results.
3. In advance, I thank you for taking this time from your busy schedule. Your response is important to me. The contact person to answer any questions or concerns about the survey is:

**Sandra (Sandy) Seeman, CHE (182)**  
**U.S. Army-Baylor MHA Administrative Resident**  
**Telephone: (210) 617-5197**  
**Fax: (210) 617-5312**



JOSE R. CORONADO, FACHE

Attachment

## **APPENDIX E**

### **LIST OF VAMCs RECEIVING MAIL SURVEY**

Albany VAMC  
113 Holland Avenue  
Albany NY 12208

Albuquerque VAMC  
2100 Ridgecrest Drive SE  
Albuquerque NM 87108

Alexandria VAMC  
Alexandria LA 71301

Altoona VAMC  
2907 Pleasant Valley Blvd.  
Altoona PA 16602-4377

Amarillo VAMC  
6010 Amarillo Blvd West  
Amarillo TX 79106

Anchorage VA  
2925 De Barr Road  
Anchorage AK 99508-2989

Ann Arbor VAMC  
2515 Fuller Road  
Ann Arbor MI 48105

Asheville VAMC  
1100 Tunnel Road  
Asheville NC 28805

Atlanta VAMC  
1670 Clairmont Road  
Decatur GA 30033

Augusta VAMC  
1 Freedom Way  
Augusta GA 30904-6285

Baltimore VAMC  
10 N Green Street  
Baltimore MD 21201

Batavia VAMC  
222 Richmond Avenue  
Batavia NY 14020

Bath VAMC  
Bath NY 14810

Battle Creek VAMC  
5500 Armstrong Road  
Battle Creek MI 49016

Bay Pines VAMC  
10000 Bay Pines Blvd  
Bay Pines FL 33504

Beckley VAMC  
200 Veterans Avenue  
Beckley WV 25801

Bedford Veterans Hosp.  
200 Springs Road  
Bedford MA 01730

Big Springs VAMC  
300 Veterans Blvd  
Big Springs TX 79720-5500

Biloxi VAMC  
400 Veterans Avenue  
Biloxi MS 39531

Birmingham VAMC  
700 S 19th Street  
Birmingham AL 35233

Boise VAMC  
500 W. Fort Street  
Boise ID 83702-4598

Bonham Memorial Veterans  
1201 E 9th Street  
Bonham TX 75418

Boston VAMC  
150 W. Huntington Ave  
Boston MA 02130

Brockton/W. Roxbury VA  
940 Belmont Street  
Brockton MA 02401

Bronx VAMC  
130 W. Kingsbridge Road  
Bronx NY 10468

Brooklyn VAMC  
800 Poly Place  
Brooklyn NY 11209

Buffalo VAMC  
3495 Bailey Avenue  
Buffalo NY 14215

Butler VAMC  
Butler PA 16001

Canandaigua VAMC  
400 Fort Hill Avenue  
Canandaigua NY 14424

Castle Point VAMC  
Castle Point NY 12511

Charleston VAMC  
109 Bee Street  
Charleston SC 24901-5799

Chicago West Side VAMC  
820 S Damen  
Chicago IL 60612

Clarksburg VAMC  
Clarksburg WV 26301

Columbia VAMC  
800 Hospital Drive  
Columbia MO 65201-5297

Dallas VAMC  
4500 S Lancaster Road  
Dallas TX 75216

Denver VAMC  
1055 Clermont Street  
Denver CO 80220

Dublin VAMC  
1826 Veterans Blvd  
US Hwy 80 West  
Dublin GA 31021

El Paso VAHC  
5001 N Piedras Street  
El Paso TX 79930-4111

Fayetteville VAMC  
1100 N College Avenue  
Fayetteville AR 72703

Fort Howard VAMC  
Fort Howard MD 21052

Cheyenne VAMC  
2360 E Pershing Blvd  
Cheyenne WY 82001

Chillicothe VAMC  
17273 State Route 104  
Chillicothe OH 45601

Cleveland VAMC  
Wade Park Unit  
10701 East Blvd  
Cleveland OH 44106

Columbia VAMC  
Columbia SC 29201

Danville VAMC  
1900 E Main Street  
Danville IL 61832

Des Moines VAMC  
3600 - 30th Street  
Des Moines IA 50310

Durham VAMC  
508 Fulton Street  
Durham NC 27705

Erie VAMC  
135 E 38th Street  
Erie PA 16504

Fayetteville VAMC  
2300 Ramsey Street  
Fayetteville NC 28301

Fort Lyon VAMC  
Fort Lyon CO 81038

Chicago Lakeside VAMC  
333 E Huron Street  
Chicago IL 60611

Cincinnati VAMC  
3200 Vine Street  
Cincinnati OH 45220

Coatesville VAMC  
1400 Black Horse Hill Road  
Coatesville PA 19320-2097

Columbus VA  
2090 Kenny Road  
Columbus OH 43221

Dayton VAMC  
4100 W 3rd Street  
Dayton OH 45428

Detroit VAMC  
4646 John T  
Detroit MI 48201

East Orange VAMC  
385 Tremont Avenue  
East Orange NJ 07018

Fargo VAMC  
2101 Elm Street  
Fargo ND 58102

Fort Harrison VAMC  
Fort Harrison MT 59636

Black Hills HC System  
Fort Meade SD 57741

Fort Wayne VAMC  
2121 Lake Avenue  
Fort Wayne IN 46805

Grand Island VAMC  
2201 N Broadwell Avenue  
Grand Island NE 68803

Hines VAMC  
Hines IL 60141

Houston VAMC  
2002 Holcombe Blvd  
Houston TX 77030

Iowa City VAMC  
Hwy 6 West  
Wilson Iowa City IA 52246

Kansas City VAMC  
1801 Linwood Blvd  
Kansas City MO 64128

Las Vegas VAMC  
1703 W Charleston Blvd  
Las Vegas NV 89102

Lexington VAMC  
Lexington KY 40511

Livermore VAMC  
4951 Arroyo Road  
Livermore CA 94550

Los Angeles VAMC  
351 E Temple Street  
Los Angeles CA 90012

Fresno VAMC  
2615 E Clinton Avenue  
Fresno CA 93703

Grand Junction VAMC  
2121 North Avenue  
Grand Junction CO 81501

Honolulu VAMC  
300 Ala Moana Blvd  
Honolulu HI 96813

Huntington VAMC  
1540 Spring Valley Drive  
Huntington WV 25704

Iron Mountain VAMC  
"H" Street  
Iron Mountain MI 49801

Knoxville VAMC  
1515 W Pleasant Street  
Knoxville IA 50138

Leavenworth VAMC  
4101 S 4th St Trafficway  
Leavenworth KS 66048

Lincoln VAMC  
600 S 70th Street  
Lincoln NE 68510

Loma Linda VAMC  
11201 Benton Street  
Loma Linda CA 92357

Louisville VAMC  
800 Zorn Avenue  
Louisville KY 40206

Gainesville VAMC  
1601 SW Archer Road  
Gainesville FL 32608-1197

Hampton VAMC  
100 Emancipation Drive  
Hampton VA 23667

Hot Springs VAMC  
Hot Springs SD 57747

Indianapolis VAMC  
1481 W Tenth Street  
Indianapolis IN 46202

Jackson VAMC  
1500 E Woodrow  
Jackson MS 39216

Lake City VAMC  
801 S Marion Street  
Lake City FL 32055-5898

Lebanon VAMC  
1700 S Lincoln Avenue  
Lebanon PA 17042-7597

Little Rock VAMC  
4300 W 7th Street  
Little Rock AR 72205-5484

Long Beach VAMC  
5901 E 7th Street  
Long Beach CA 90822

Lyons VAMC  
Lyons NJ 07939

Madison VA Hospital  
2500 Overlook Terrace  
Madison WI 53705

Marion VAMC  
2401 W Main Street  
Marion IL 62959

Memphis VAMC  
1030 Jefferson Avenue  
Memphis TN 38104

Milwaukee VAMC  
Milwaukee WI 53295

Montrose VAMC  
Montrose NY

Muskogee VAMC  
Honor Heights Drive  
Muskogee OK 74401

New York VAMC  
423 E 23rd Street  
New York NY 10010

Northampton VAMC  
Northampton MA 01060

Omaha VAMC  
4101 Woolworth Avenue  
Omaha NE 68105

Philadelphia VAMC  
University & Woodland Ave  
Philadelphia PA 19104

Manchester VAMC  
718 Smyth Road  
Manchester NH 03104

Marion VAMC  
E 38th Street  
Marion IN 46953-4589

Miami VAMC  
1201 NW 16th Street  
Miami FL 33125

Minneapolis VAMC  
1 Veterans Drive  
Minneapolis MN 55417

Mountain Home VAMC  
Mountain Home  
(Johnson City) TN 37684

Nashville VAMC  
1310 24th Avenue S  
Nashville TN 37212-2637

Newington VAMC  
555 Willard Avenue  
Newington CT 06111

Northport VAMC  
79 Middleville Road  
Northport NY 11768-2290

Palo Alto HC System  
3801 Miranda Avenue  
Palo Alto CA 94304-1207

Phoenix VAMC  
650 E Indian School Road  
Phoenix AZ 85012

Manila VAMC  
2201 Roxas Blvd  
Pasay City Metro Manila  
1300 Philippines

Martinsburg VAMC  
Charles Town Road  
Martinsburg WV 25401

Miles City VAMC  
210 S Wnchester  
Miles City MT 59301

Montgomery VAMC  
215 Perry Hill Road  
Montgomery AL 36109-3798

Murfreesboro VAMC  
3400 Lebanon Road  
Murfreesboro TN 37129

New Orleans VAMC  
1610 Perdido Street  
New Orleans LA 70146

North Chicago VAMC  
3001 Green Bay Road  
North Chicago IL 60064

Oklahoma City VAMC  
921 NE 13th Street  
Oklahoma City OK 73104

Perry Point VAMC  
Perry Point MD 21902

Pittsburgh VAMC  
Highland Drive  
Pittsburgh PA 15206-1297

Pittsburgh VAMC  
University Drive "C"  
Pittsburgh PA 15240

Pleasant Hill VAHCS  
2300 Contra Costa Blvd  
Suite 440  
Pleasant Hill CA 94523

Poplar Bluff VAMC  
1500 N Westwood Blvd  
Poplar Bluff MO 63901

Portland VAMC  
3710 SW US Veterans Rd  
PO Box 1034  
Portland OR 97207

Prescott VAMC  
Prescott AZ 86313

Providence VAMC  
830 Chalkstone Avenue  
Providence RI 02908

Reno VAMC  
1000 Locust Street  
Reno NV 89520

Richmond VAMC  
1201 Broad Rock Blvd  
Richmond VA 23249

Roseburg VAMC  
913 NW Garden Valley Blvd  
Roseburg OR 97470-6513

Saginaw VAMC  
1500 Weiss Street  
Saginaw MI 48602

Salem VAMC  
1970 Boulevard  
Salem VA 24153

Salisbury VAMC  
1601 Brenner Avenue  
Salisbury NC 28144

Salt Lake City VAMC  
500 Foothill Drive  
Salt Lake City UT 84148

San Diego VAMC  
3350 La Jolla Village Drive  
San Diego CA 92161

San Francisco VAMC  
4150 Clement Street  
San Francisco CA 94121

San Juan VAMC  
One Veterans Plaza  
San Juan PR 00927-5800

Seattle VAMC  
1660 S Columbia Way  
Seattle WA 98108

Sepulveda VAMC  
6111 Plummer Street  
Sepulveda CA 91343

Sheridan VAMC  
Sheridan WY 82801

Shreveport VAMC  
510 E Stoner Avenue  
Shreveport LA 71101-4295

Sioux Falls VAMC  
2501 W 22nd Street  
Sioux Falls SD 57117

Spokane VAMC  
North 4815 Assembly  
Spokane WA 99205

St Cloud VAMC  
4801 8th Street N  
St Cloud MN 56303

St Louis VAMC  
1 Jefferson Barracks Drive  
St Louis MO 63125

Syracuse VAMC  
800 Irving Avenue  
Syracuse NY 13210

American Lake VAMC  
Tacoma WA 98493

Tampa VAMC  
13000 Bruce B Downs Blvd  
Tampa FL 33612

Central Texas Veterans HCS  
1901 S First Street  
Temple TX 76504

Togus VAMC  
Togus ME 04330

Tomah VAMC  
500 E Veterans Street  
Tomah WI 54660

Topeka VAMC  
2200 Gage Blvd  
Topeka KS 66622

Tuskegee VAMC  
Tuskegee AL 36083

West Haven VAMC  
650 Campbell Avenue  
West Haven CT 06516

White City VAMC  
White City OR 97503

Wilkes Barre VAMC  
1111 East End Blvd  
Wilkes Barre PA 18711

Tucson VAMC  
3601 S 6th Avenue  
Tucson AZ 85723

Walla Walla VAMC  
77 Wainwright Drive  
Walla Walla WA 99362

West Los Angeles VAMC  
Wilshire & Sawtelle Blvds  
West Los Angeles CA  
90073

White River Junction VAMC  
N Hartland Road  
White River Junction VT  
05009

Wilmington VAMC  
1601 Kirkwood Hwy  
Wilmington DE 19805

Tuscaloosa VAMC  
3701 Loop Road E  
Tuscaloosa AL 35404

Washington VAMC  
50 Irving Street NW  
Washington DC 20422

West Palm Beach VAMC  
7305 N Military Trail  
Palm Beach Gardens FL  
33240

Wichita VAMC  
5500 E Kellogg  
Wichita KS 67218

Department of  
Veterans Affairs

## Memorandum

Date: December 16, 1996

From: Administrative Resident (671/182)  
South Texas Veterans Health Care System, San Antonio, TX 78284

Subj: SURVEY OF VAMC DIRECTORS: Product Line Management Implementation

To: Director (OO)

1. I would like to take this opportunity to thank each of you for your recent participation in completing the Product Line Management Implementation Survey of VAMC Directors. The survey returns should provide very useful and interesting information.
2. If you have not had the opportunity to complete and return the survey yet, please do so before **January 1, 1997**. You may send it to the following address:

**Sandra (Sandy) Seeman, CHE (182)**  
**U.S. Army-Baylor MHA Administrative Resident**  
**South Texas Veterans Health Care System**  
**7400 Merton Minter Blvd**  
**San Antonio, TX 78284**  
**Fax: (210) 617-5312**

In the event you have misplaced it, please contact me at telephone **210-617-5197**. I will gladly fax another copy to you.

3. I wish each of you a safe holiday season.

  
SANDRA SEEMAN, CHE



## APPENDIX G

### MAIL-OUT SURVEY OF VAMC DIRECTORS: SPSS STATISTICAL CODES

DEMOGRAPHICS				
Survey	SPSS	Survey		
Question	Variable	Code	Definition	Question Variable
1	bed	1= 0-200 2= 201-400 3= 401-600 4= 601-800 5= 801-1000 6= 1001>	Number beds available in hospital	2
3	gme	1=Yes; 0=No	Affiliation present or absent	cl1 cl2 cl3 cl4 cl5 cl6 cl7 cl8 cl9 cl10 cl11 cl12 cl13 cl14 cl15 cl16
6	plm	1=Yes; 0=No	PLM implemented	1=Yes;0=No 1=Yes;0=No 1=Yes;0=No 1=Yes;0=No 1=Yes;0=No 1=Yes;0=No 1=Yes;0=No 1=Yes;0=No 1=Yes;0=No 1=Yes;0=No 1=Yes;0=No 1=Yes;0=No 1=Yes;0=No 1=Yes;0=No 1=Yes;0=No 1=Yes;0=No
7	pln	1=Yes; 0=No	Planning to implement PLM	Ambulatory Care Medical Service Substance Abuse Domiciliary Dialysis Organ Transplant Spinal Cord Injury Dental Surgical Service Mental Health Long Term Care Operating Room Bone Marrow Transplant Rehabilitation Service Acute Care Other
11	tim	1= <6months 2= 7-12months 3= 13-24months 4= >24months	Number months using PLM approach	
KNOWLEDGE OF PLM				
Survey	Survey			
Question	Variable	Code	Definition	Question Variable
4	kno	1=Yes; 0=No	Familiar with PLM	5
9	des	1=Yes; 0=No	Desire for PLM knowledge	so1 so2 so3 so4 so5 so6 so7 so8
				1=Yes;0=No 1=Yes;0=No 1=Yes;0=No 1=Yes;0=No 1=Yes;0=No 1=Yes;0=No 1=Yes;0=No 1=Yes;0=No 1=Yes;0=No 1=Yes;0=No 1=Yes;0=No 1=Yes;0=No 1=Yes;0=No 1=Yes;0=No 1=Yes;0=No 1=Yes;0=No
				Health Care Literature School VISN Communication Manufacturing Literature Seminars/conferences Colleagues Central Office Communication Other

REASONS FOR NOT IMPLEMENTING PLM				DRIVING FORCES FOR PLM			
Survey	SPSS	Code	Definition: Present/Absent	Survey	SPSS	Code	Definition: Present/Absent
8	Question Variable			12	Question Variable		
	re1	1=Yes; 0=No	Do not know enough		DF1	1=Yes; 0=No	To reduce costs
	re2	1=Yes; 0=No	Resistance by administration		DF2	1=Yes; 0=No	To reduce bed days
	re3	1=Yes; 0=No	Resistance by medical staff		DF3	1=Yes; 0=No	Response to veteran needs
	re4	1=Yes; 0=No	Resistance by employees		DF4	1=Yes; 0=No	To reduce the ALOS
	re5	1=Yes; 0=No	Too expensive		DF5	1=Yes; 0=No	Directed to implement PLM
	re6	1=Yes; 0=No	Insufficient information system		DF6	1=Yes; 0=No	To control costs
	re7	1=Yes; 0=No	Current structure effective		DF7	1=Yes; 0=No	To improve quality of care
	re8	1=Yes; 0=No	Other		DF8	1=Yes; 0=No	To reduce duplication of services
					DF9	1=Yes; 0=No	To restructure the organization
					DF10	1=Yes; 0=No	Other
PRODUCT LINES IMPLEMENTED							
Survey	SPSS	Code	Definition: PLs Based On:	Survey	SPSS	Code	Definition: Potential PLs
13	Question Variable			15	Question Variable		
	bas1	1=Yes; 0=No	VISN PLs		pot1	1=Yes; 0=No	Ambulatory Care
	bas2	1=Yes; 0=No	Facility PLs		pot2	1=Yes; 0=No	Acute Care
	bas3	1=Yes; 0=No	Both		pot3	1=Yes; 0=No	Surgical Services
					pot4	1=Yes; 0=No	Substance Abuse
					pot5	1=Yes; 0=No	Rehabilitation
					pot6	1=Yes; 0=No	BMTU
					pot7	1=Yes; 0=No	Spinal Cord Injury
					pot8	1=Yes; 0=No	Dental Service
					pot9	1=Yes; 0=No	Operating Room
					pot10	1=Yes; 0=No	Medical Service
					pot11	1=Yes; 0=No	Mental Health
					pot12	1=Yes; 0=No	Long Term Care
					pot13	1=Yes; 0=No	Organ Transplant
					pot14	1=Yes; 0=No	Dialysis
					pot15	1=Yes; 0=No	Domiciliary
					pot16	1=Yes; 0=No	Other
14	Question Variable						
	pls1	1=Yes; 0=No	Ambulatory Care				
	pls2	1=Yes; 0=No	Acute Care				
	pls3	1=Yes; 0=No	Surgical Services				
	pls4	1=Yes; 0=No	Substance Abuse				
	pls5	1=Yes; 0=No	Rehabilitation				
	pls6	1=Yes; 0=No	BMTU				
	pls7	1=Yes; 0=No	Spinal Cord Injury				
	pls8	1=Yes; 0=No	Dental Service				
	pls9	1=Yes; 0=No	Operating Room				
	pls10	1=Yes; 0=No	Medical Service				
	pls11	1=Yes; 0=No	Mental Health				
	pls12	1=Yes; 0=No	Long Term Care				
	pls13	1=Yes; 0=No	Organ Transplant				
	pls14	1=Yes; 0=No	Dialysis				
	pls15	1=Yes; 0=No	Domiciliary				
	pls16	1=Yes; 0=No	Other				

# PRODUCT LINE PLANNING AND IMPLEMENTATION

PRODUCT LINE PLANNING AND IMPLEMENTATION					
Survey SPSS			Survey SPSS		
Question Variable	Code	Definition: Planning Staff	Question Variable	Code	Definition: Implementation Steps
19					
st1	1=Yes; 0=No	Director	im1	1=Yes; 0=No	Organization's mission developed
st2	1=Yes; 0=No	Associate Director	im2	1=Yes; 0=No	Followed consultant's plan
st3	1=Yes; 0=No	Clinical service chiefs	im3	1=Yes; 0=No	PLM education for management
st4	1=Yes; 0=No	Patients	im4	1=Yes; 0=No	PLM education for all services
st5	1=Yes; 0=No	Employees	im5	1=Yes; 0=No	Identified PLs
st6	1=Yes; 0=No	Medical staff	im6	1=Yes; 0=No	Identified organization's PLM role
st7	1=Yes; 0=No	Chief of Staff	im7	1=Yes; 0=No	Developed PL business plans
st8	1=Yes; 0=No	Administrative service chiefs	im8	1=Yes; 0=No	Assessed information systems
st9	1=Yes; 0=No	Union	im9	1=Yes; 0=No	Developed PL performance plans
st10	1=Yes; 0=No	Management consultant	im10	1=Yes; 0=No	Collaborated with VISN Director
st11	1=Yes; 0=No	Other	im11	1=Yes; 0=No	Selected PL manager(s)

# PRODUCT LINE MANAGERS

Survey		SPSS	Survey		SPSS
Question Variable	Code	Definition	Question Variable	Code	Definition
17a	mg	1=Yes; 0=No	17d	ti1	1=Yes; 0=No
17b	mmg	1=Yes; 0=No		ti2	1=Yes; 0=No
17c	ed1	1=Yes; 0=No		ti3	1=Yes; 0=No
	ed2	1=Yes; 0=No		ti4	1=Yes; 0=No
	ed3	1=Yes; 0=No		ti5	1=Yes; 0=No
	ed4	1=Yes; 0=No		ti6	1=Yes; 0=No
	ed5	1=Yes; 0=No		ti7	1=Yes; 0=No
	ed6	1=Yes; 0=No		ti8	1=Yes; 0=No
	ed7	1=Yes; 0=No		ti9	1=Yes; 0=No
	ed8	1=Yes; 0=No		ti10	1=Yes; 0=No
	ed9	1=Yes; 0=No		ti11	1=Yes; 0=No
	ed10	1=Yes; 0=No		ti12	1=Yes; 0=No
	ed11	1=Yes; 0=No		ti13	1=Yes; 0=No
				ti14	1=Yes; 0=No
				ti15	1=Yes; 0=No
				ti16	1=Yes; 0=No
				ti17	1=Yes; 0=No
				ti18	1=Yes; 0=No
				ti19	1=Yes; 0=No
				ti20	1=Yes; 0=No
				ti21	1=Yes; 0=No
				ti22	1=Yes; 0=No
				ti23	1=Yes; 0=No
				ti24	1=Yes; 0=No
				ti25	1=Yes; 0=No
				ti26	1=Yes; 0=No
				ti27	1=Yes; 0=No
				ti28	1=Yes; 0=No
				ti29	1=Yes; 0=No
				ti30	1=Yes; 0=No
				ti31	1=Yes; 0=No
				ti32	1=Yes; 0=No
				ti33	1=Yes; 0=No
					Other
Survey			SPSS		
Question Variable	Code	Definition: Prior Title			
17d contd	ti33	1=Yes; 0=No	Chief, Social Work		
	ti34	1=Yes; 0=No	Chief, MAS		
	ti35	1=Yes; 0=No	Chief, Psychiatry		
	ti36	1=Yes; 0=No	Clinical Nurse Specialist		
	ti37	1=Yes; 0=No	Associate Director		
	ti38	1=Yes; 0=No	Medical Director/LTC		
	ti39	1=Yes; 0=No	Chief, Dental		
	ti40	1=Yes; 0=No	Chief, Engineering		
	ti41	1=Yes; 0=No	ACOS/Research		
	ti42	1=Yes; 0=No	Chief, Radiology		
	ti43	1=Yes; 0=No	Chief, Extended Care		
	ti44	1=Yes; 0=No	Chief, A&MM		
	ti45	1=Yes; 0=No	Chief, Nuclear Medicine		
	ti46	1=Yes; 0=No	Chief Operations Officer		
	ti47	1=Yes; 0=No	Clinical employee		
	ti48	1=Yes; 0=No	Other		



## APPENDIX H

### STVHCS KEY MANAGEMENT INTERVIEW

Title of Interviewee/research participant:

Date:

1. How would you envision the PLM organizational structure in our facility?

- ☐ Traditional
- ☐ Czarist
- ☐ Market-oriented
- ☐ Service-oriented
- ☐ Matrix
- ☐ Functional

2. What problems, if any, would you foresee in implementing PLM in our facility?

- |   |   |
|---|---|
| <input type="checkbox"/> Resistance by top management     | <input type="checkbox"/> Resistance by physicians               |
| <input type="checkbox"/> Resistance by clinical employees | <input type="checkbox"/> Resistance by administrative employees |
| <input type="checkbox"/> Cost                             | <input type="checkbox"/> Selecting product line managers        |
| <input type="checkbox"/> Time-consuming                   | <input type="checkbox"/> Reorganizing functional services       |
| <input type="checkbox"/> Insufficient information systems | <input type="checkbox"/> Defining PLM                           |
| <input type="checkbox"/> Patient complaints               | <input type="checkbox"/> Selecting PLs                          |

3. What benefits would you hope to realize from PLM?

- |  |   |
|--|---|
| <input type="checkbox"/> Decreased costs                   | <input type="checkbox"/> Decreased ALOS                 |
| <input type="checkbox"/> Decreased bed days                | <input type="checkbox"/> Improved quality of care       |
| <input type="checkbox"/> Decreased waiting times           | <input type="checkbox"/> Increased access to care       |
| <input type="checkbox"/> Improved patient satisfaction     | <input type="checkbox"/> Improved employee satisfaction |
| <input type="checkbox"/> Decreased duplication of services |   |

4. What qualifications would you expect of a PL manager applicant?

- |   |  |
|---|--|
| <input type="checkbox"/> High School Diploma                            | <input type="checkbox"/> Baccalaureate degree      |
| <input type="checkbox"/> Masters degree in public health administration | <input type="checkbox"/> Doctorate                 |
| <input type="checkbox"/> Masters degree in health care administration   | <input type="checkbox"/> Associate degree          |
| <input type="checkbox"/> Masters degree in business administration      | <input type="checkbox"/> Medical degree            |
| <input type="checkbox"/> Degree in an allied health profession          | <input type="checkbox"/> Masters degree in nursing |
| <input type="checkbox"/> PLM experience                                 | <input type="checkbox"/> Marketing experience      |
| <input type="checkbox"/> Negotiating skills                             | <input type="checkbox"/> Communication skills      |

5. Describe your view of the PL manager's role and responsibility.

- |  |   |  |
|--|---|--|
| <input type="checkbox"/> Budget responsibility       | <input type="checkbox"/> Monitoring operations        | <input type="checkbox"/> Monitoring clinical programs  |
| <input type="checkbox"/> PL personnel responsibility | <input type="checkbox"/> Marketing PLs                | <input type="checkbox"/> Monitoring workload           |
| <input type="checkbox"/> Educating PL personnel      | <input type="checkbox"/> Report to Director           | <input type="checkbox"/> Developing clinical protocols |
| <input type="checkbox"/> Report to Chief of Staff    | <input type="checkbox"/> Report to Associate Director | <input type="checkbox"/> Developing PLs                |

6. Do you think the STVHCS should implement PLM? Explain your response.

## **APPENDIX I**

### **MISSION - VISION - VALUES**

#### **VISN 17 Heart of Texas Veterans Healthcare Network Mission**

The mission of the Heart of Texas Veterans Healthcare Network is to provide a full continuum of healthcare services to a diverse veteran patient population with varying needs. This is accomplished through an integrated delivery system that pursues and supports collaborative ventures, demonstrates sound financial performance, maintains safe and pleasant environments, and strong infrastructure in all facilities. Improved patient care is assured by defining and monitoring quality outcomes, conducting timely utilization review, focusing on process improvements, and maximizing the strengths of each facility within the Network (Heart of Texas Veterans Healthcare Network. "Network Plan: FY1997 - FY2001," Mission and Goals, II-1).

#### **STVHCS Mission**

In partnership with our patients, volunteers, employees, and the community, we are committed to:

- \*Improving the quality of life of our patients by providing comprehensive health care services focused on their special needs.
- \*Providing leadership in the education of health care providers.
- \*Conducting research that enhances the quality of life.
- \*Enhancing the capabilities of the Department of Defense through support and readiness.

#### **STVHCS Vision**

The vision of the STVHCS is:

- \*To provide comprehensive, personalized health care to all patients with compassion and sensitivity.
- \*To be recognized as an employer of choice locally and nationally in order to attract the highest quality staff.
- \*To create an empowered and committed workforce united in common values and goals.
- \*To become a center of excellence in meeting the unique needs of our patients and community through service delivery, education, and research.
- \*To make continuous quality improvement the foundation of our daily work.
- \*To provide an efficient, cost effective, timely and state of the art health delivery system that will maximize satisfaction.

## **STVHCS Values**

We are guided by the following values:

- \*Patients: Our #1 Priority
- \*Employees: Professional, courteous, compassionate, competent
- \*Partnerships: Based on trust, respect and integrity
- \*Environment: Safe and pleasant
- \*Culture: One which supports personal growth, initiative, creativity and diversity



## APPENDIX J

### RESULTS OF MAIL SURVEY OF VAMC DIRECTORS

Instruction: Unless otherwise indicated, the numbers in **bold** represent the number of facilities responding yes or marking the choice.

**1. How many beds are operational in your facility?**

45 0 - 200  
39 201 - 400  
22 401 - 600  
17 601 - 800  
6 801 - 1000  
3 1001 or more

**2. What clinical services are provided in your facility?**

<u>130</u> Ambulatory Care	<u>113</u> Surgical Service
<u>129</u> Medical Service	<u>128</u> Mental Health
<u>124</u> Substance Abuse	<u>107</u> Long Term Care
<u>33</u> Domiciliary	<u>103</u> Operating Room
<u>66</u> Dialysis	<u>3</u> Bone Marrow Transplant
<u>13</u> Organ Transplant	<u>108</u> Rehabilitation Service
<u>24</u> Spinal Cord Injury	<u>121</u> Acute Care
<u>131</u> Dental Service	

**OTHER IDENTIFIED CLINICAL SERVICES PROVIDED** (Numbers in parenthesis indicate number VAMCs responding with the answer):

1. Homeless (2)
2. SUPT (1)
3. CWT/TR (2)
4. Intermediate Care (1)
5. Day Treatment Center (1)
6. ADHC (2)
7. Extended Care (2)
8. Primary Care (4)
9. Blind Rehabilitation Center (4)
10. GRECC (1)
11. TBI (1)
12. Recreation Therapy (1)
14. PTSD (5)
15. Nursing Home Care Unit (1)
16. Long Term Psychiatric Care (1)
17. Audiology (1)
18. CMOP (1)
19. Prosthetics (1)
20. Fast Neutron Beam Therapy (1)

21. Radiation Therapy (3)
22. Central Dental Lab (1)
23. Women's Clinic (1)
24. Same Day Surgery (1)
25. Sleep Lab (1)
26. Cardio-Thoracic/Cardiology (3)
27. Neurology (2)
28. Dermatology (1)
29. Nuclear medicine/CT Scanning/MRI (2)
30. HBHC/HBPC (2)
31. Respite (1)
32. Halfway House (on campus) (1)
33. Oncology (1)
34. GEM (1)
35. Critical Care (1)
36. Pulmonology (1)
37. Urology (1)

**3. Does your facility have affiliations with graduate medical education (GME) programs (housestaff)?**  
**YES: 107 NO: 25**

**4. Are you familiar with the term Product Line Management (PLM)? YES: 132 NO: 1**

**5. If so, how did you hear about PLM?**

<u>125</u> Health care literature	<u>105</u> Seminars/conferences
<u>22</u> School	<u>95</u> Colleagues
<u>106</u> VISN communication	<u>69</u> Central Office communication
<u>32</u> Manufacturing literature	

**6. Have you implemented PLM in your facility? YES: 40 NO: 92**

(If you responded YES to question #6, skip to question #11. If you responded NO to question #6, please complete questions 7 through 10 only.)

**7. Are you currently planning to implement PLM in your facility? YES: 51 NO: 37 Missing data: 4**

**8. What do you perceive the reasons for not implementing PLM in your facility?**

<u>51</u> Do not know enough about PLM to make a decision
<u>4</u> Resistance by administration
<u>6</u> Resistance by medical staff
<u>6</u> Resistance by employees
<u>5</u> Too expensive to implement
<u>20</u> Do not have a sufficient information systems to support PLM
<u>25</u> Current organizational structure is effective and efficient

**OTHER IDENTIFIED REASONS** (Numbers in parenthesis indicate number VAMCs responding with the answer):

1. Resistance from merging VAMC (1)
2. Resistance from Network Headquarters (1)
3. Plan to implement/in process of implementing (16)
4. Not ready during 1997 (1)
5. Network Director has established long term (2 years) time frame for establishment. (1)
6. PLM is not effective in smaller institutions where folks have many co-lateral duties. (1)
7. Do not have demonstrated results of PLM success. (8)
8. Awaiting publication of VISN Strategic Plan; VISN Planning Board currently developing prototype for facility guidance and implementation. (8)
9. Implementing collaborative management teams which are proving effective. (1)
10. No proven savings/benefits. (2)
11. Questions regarding resources as well as "chain of command." (1)
12. Put on hold pending integration with nearby VAMC. (1)
13. Moving slowly, basing decisions on proven efficacy (not yet shown) of other VA initiatives. (1)
14. We can all become more cost effective/efficient without totally reconstructing the system. (1)
15. Faddish over-reaction to system problems which could as easily be dealt with using true leadership. (2)
16. Partnership concurrence and negotiation have slowed implementation. (2)
17. Chose to reorganize our committee structure first. (1)
18. Mixed success in other healthcare organizations/results very poor. (2)
19. Undergoing other organizational changes at the present time. (1)
20. Not convinced it is the most effective way to go ...for employee satisfaction & productivity. (1)
21. Undergoing change in top management staff. (1)
22. Higher priority initiatives such as reducing BDOC, expanding primary care enrollment. (1)

**9. Would you like to know more about PLM? YES: 72 NO: 13 Missing data: 7**

**11. How long has your facility been organized using a PLM approach?**

- 20 Less than 6 months  
11 7 months to 12 months  
8 13 months to 24 months  
1 Greater than 24 months

**12. Why did you implement PLM (driving forces) in your facility? (Rank the following responses in order of priority, with 1 indicating the strongest reason and 10 or more indicating the weakest.)**

Many did not rank the driving forces. Therefore, two reporting methods are provided: 1) number of VAMCs indicating each driving force important (no rank); and 2) rank order of importance.

1) Number of VAMCs Indicating Each Driving Force Importance:

- |   |   |
|---|---|
| <u>28</u> To reduce costs                             | <u>27</u> To control costs                |
| <u>27</u> To reduce bed days                          | <u>35</u> To improve the quality of care  |
| <u>30</u> To reduce duplication of services           |   |
| <u>23</u> Response to expressed veteran needs         | <u>32</u> To restructure the organization |
| <u>25</u> To reduce the average length of stay (ALOS) | <u>21</u> Directed to do so by superiors  |

**2) Rank Order of Importance:**

1. To improve the quality of care
2. To restructure the organization
3. To reduce costs
4. To reduce duplication of services
5. To control costs
6. To reduce bed days
7. To reduce the average length of stay (ALOS)
8. Response to expressed veteran needs
9. Directed to do so by superiors

**OTHER REASONS PROVIDED** (Numbers in parenthesis indicate number VAMCs responding with the answer):

1. The organizational structure should reflect the mission. (1)
2. To provide better/coordinated patient care. (2)
3. To meet defined outcomes to improve patient care. (1)
4. To meet strategic goals. (1)
5. Patient focused care. (1)
6. To increase accountability. (1)
7. To improve continuity of care/provide seamless care. (2)
8. To implement physician managers. (1)
9. To geographically define the management structure. (1)
10. To facilitate team concept of delivering patient care. (1)
11. VHA's key guiding principles -- quality, customer satisfaction, accessibility, and cost containment. (1)
12. To improve communication. (1)
13. Loss of staff allowed easy restructuring. (1)

**13. Selected product lines in your facility are based upon:**   1   VISN product lines;   30   facility specific product lines; or   9   both.

**14. In what areas have you implemented product lines (PLs) in your facility?**

<u>  24  </u> Ambulatory Care	<u>  4  </u> Operating Room
<u>  11  </u> Acute Care	<u>  14  </u> Medical Services
<u>  12  </u> Surgical Services	<u>  28  </u> Mental Health
<u>  9  </u> Substance Abuse	<u>  15  </u> Long Term Care
<u>  5  </u> Rehabilitation Service	<u>  0  </u> Organ Transplant
<u>  0  </u> Bone Marrow Transplant	<u>  1  </u> Dialysis
<u>  2  </u> Spinal Cord Injury Service	<u>  1  </u> Domiciliary
<u>  5  </u> Dental Service	

**OTHER IDENTIFIED IMPLEMENTED PLs** (Numbers in parenthesis indicate number of VAMCs responding with the answer):

1. Outpatient clinic (1)
2. Diagnostic support (Lab/Radiology/Nuclear Medicine) (1)
3. Education (2)
4. Facility Support (EMS/Engineering) (1)

5. Information Management (MAS/IRM) (1)
6. Primary Care, Med-Surg & Primary Care (7)
7. Resource Management/Resource Support Services (2)
8. Education & Research (4)
9. Finance; Financial & Business Affairs (2)
10. Inpatient (1)
11. Clinical; Clinical Operations (2)
12. Geriatrics & Extended Care (4)
13. Nursing (1)
14. MAS (1)
15. Surgical, Substance Abuse, Operating Room, and Medical are included in Acute Care PL. (1)
16. Clinical Support (Xray, 119, 120, etc) (1)
17. Administrative Support/Environmental Administrative Support (2)
18. Guest Relations (1)
19. Facility Management Service (2)
20. Informatics (1)
21. Human Resources (1)
22. Community Based Care Services (1)
23. Patient Care Services (1)
24. Quality Management (1)
25. Public/Consumer Affairs-Community Resources (1)
26. Behavioral Health Care (1)
27. Combined Ward Administration with Nursing (1)
28. Combined Educational Resources with Medical Media (1)
29. Combined Security with Engineering and Safety (1)
30. Combined Voluntary Service with Marketing/Public Affairs (1)
31. Administrative Resources (1)
32. Administrative Operations (1)
33. Testing and Diagnostic Care/Diagnostic Services (2)
34. Special Emphasis Programs (1)

**15. In what other areas are you considering implementing product lines?**

- |   |                               |
|---|-------------------------------|
| <u>  3  </u> Ambulatory Care            | <u>  1  </u> Operating Room   |
| <u>  3  </u> Acute Care                 | <u>  3  </u> Medical Services |
| <u>  2  </u> Surgical Services          | <u>  3  </u> Mental Health    |
| <u>  1  </u> Substance Abuse            | <u>  8  </u> Long Term Care   |
| <u>  5  </u> Rehabilitation Service     | <u>  0  </u> Organ Transplant |
| <u>  0  </u> Bone Marrow Transplant     | <u>  1  </u> Dialysis         |
| <u>  0  </u> Spinal Cord Injury Service | <u>  0  </u> Domiciliary      |
| <u>  2  </u> Dental Service             | <u> 15  </u> None             |

**OTHER AREAS CONSIDERED** (Numbers in parenthesis indicate number VAMCs responding with the answer):

1. Information management (2)
2. Learning resource (1)
3. Business functions (1)
4. Lab & Xray (1)

5. Education (1)
6. Imaging; Radiology Services (2)
7. Facilities Management (1)
8. Diagnostic Services (1)
9. Administration/Administrative Services (2)
10. Partially converted, the plan is to implement PLM throughout the Medical Center with 30 services reorganized into six (6) Product Lines. (1)
11. Patient Care Services (1)

**16. Who was involved in planning and implementing PLM in your facility?**

<u>39</u> Director	<u>29</u> Medical staff
<u>37</u> Associate Director	<u>36</u> Chief of Staff
<u>35</u> Clinical service chiefs	<u>32</u> Administrative service chiefs
<u>10</u> Patients	<u>30</u> Union
<u>26</u> Employees	<u>14</u> Management consultant

**OTHER IDENTIFIED STAFF:**

1. Nursing staff
2. Medical Director for Clinical Programs
3. Board of Directors
4. Governmental leaders and veterans service representatives were kept informed of planning and asked for input and comment.
5. Stakeholders (i.e., affiliates, Congress, VSO's, State Hospital Association, etc.).

**17. a. Have you identified a product line manager for each PL? YES: 34 NO: 6**

(Comment from one responding no: Product lines are organized around councils with a chair.)

**b. Is there more than one product line manager for each PL? YES: 6 NO: 31 Missing data: 4**

*If YES, briefly explain how their roles differ (Numbers in parenthesis indicate number of VAMCs responding with the answer):*

1. Clinical, MH&BSS, Ambulatory Care, Inpatient, Geriatrics & Extended Care, and Education & Research all have ACOS, too. (1)
2. Three self-directed primary care teams with MD and RN Clinical Manager. (1)
3. We have created a management board for each product line. The PL Manager coordinates the work of the management board. (1)
4. Each PL has one clinical manager (MD) and one business manager (MBA). (2)
5. Some divisions have only one but all clinical divisions have more than one manager. Where there is more than one manager, the division managers work together as a management team. (1)
6. Some functional lines have associate or medical director positions which support the functional line manager. (1)

**c. What is the educational preparation of your product line manager(s)?**

<u>4</u> High School Diploma	<u>16</u> Baccalaureate degree
<u>7</u> Masters degree in public health administration	<u>11</u> Doctorate
<u>10</u> Masters degree in health care administration	<u>3</u> Associate degree
<u>8</u> Masters degree in business administration	<u>27</u> Medical degree
<u>10</u> Degree in an allied health profession	<u>18</u> Masters degree in nursing

**OTHER IDENTIFIED EDUCATIONAL PREPARATION:**

1. We have three (3) acting PL Managers at this time. We anticipate all of our PL Managers will have a minimum of graduate education, managerial experience, and expertise.
2. Education requirements are dictated by the pay plan/job classification of each PL Manager. There are no additional pre-requisites other than those which are regulatory.
3. Experience in the area for administrative lines.

**d. What was the product line manager's title prior to PLM implementation?**

<u>6</u> Chief of Staff	<u>8</u> Chief, Surgical Service	<u>5</u> Chief, Social Work
<u>9</u> Chief, Medicine Service	<u>10</u> Chief, Nursing Service	<u>6</u> Chief, MAS
<u>7</u> Chief, Fiscal Service	<u>2</u> Chief, Ambulatory Care	<u>17</u> Chief, Psychiatry Service
<u>3</u> Chief, HRM	<u>3</u> Chief, IRM	<u>2</u> Clinical Nurse Specialist
<u>0</u> Case Manager	<u>1</u> Administrative Officer	<u>3</u> Associate Director
<u>3</u> Assistant Director	<u>4</u> Head Nurse	<u>2</u> Medical Director/LTC
<u>1</u> Chief, Spinal Cord Injury Service	<u>2</u> Chief, Physical Medicine & Rehabilitation	<u>4</u> Chief, Dental Service
<u>1</u> Chief, Voluntary Service	<u>1</u> Chief, Prosthetics Service	<u>8</u> Chief, Engineering Service
<u>13</u> ACOS/Ambulatory Care	<u>3</u> ACOS, Education	<u>3</u> ACOS/Research
<u>7</u> ACOS/Extended Care	<u>7</u> Chief, Psychology Service	<u>1</u> Chief, Radiology Service
<u>4</u> Chief, Pharmacy Service	<u>1</u> Chief, Police & Security	<u>2</u> Chief, Extended Care
<u>4</u> Chief, Environmental Management Service	<u>4</u> Chief, Nutrition & Food Service	<u>3</u> Chief, Acquisition & Material Management
<u>0</u> Chief, Anesthesiology	<u>1</u> Chief, Audiology and Speech Pathology	<u>0</u> Chief, Nuclear Medicine
<u>3</u> Chief, Pathology & Laboratory Medicine	<u>1</u> Administrative service employee	<u>0</u> Chief Operations Officer
<u>0</u> Medical Director/Bone Marrow Transplant	<u>0</u> Administrative service assistant chief	<u>4</u> Clinical service employee
<u>2</u> Clinical service supervisor		<u>3</u> Clinical service assistant chief

**OTHER IDENTIFIED PRIOR TITLES** (Numbers in parenthesis indicate number VAMCs responding with the answer):

1. Chief, Long Term Care (1)
2. Chief, Recreation Therapy (2)
3. Administrative Fellow (1)
4. Chief, Quality Management (1)
5. Director, GRECC (1)
6. Assistant Director (1)
7. Assistant Chief of Staff (2)
8. Coordinator, Public Affairs/Marketing (1)
9. Vet Center Counselor (1)
10. Health Systems Specialist (1)
11. Physician/Psychiatrist (2)
12. Special Projects Coordinator, Nursing Service (1)
13. Associate Chief Nurse (non-VA) (1)
14. Chief, Neurology Service (1)

**e. To whom (title) does the product line manager report?** (Numbers in parenthesis indicate number VAMCs responding with the answer.)

1. Product line managers report to product line chiefs. (1)
2. Top management/triad. (2)
3. Chief of Staff (17)
4. Medical Center Director (9)
5. Executive Leadership Council/Team (3)
6. Associate Director (7)
7. Chief Medical Officer (2)
8. Quality Management Board (1)
9. Chief Operations Officer (2)
10. VISN PL Manager (1)
11. Board of Directors (1)
12. Managed Care Board (1)

**18. Are fiscal responsibilities decentralized to the PL manager?** YES: 24 NO: 13 Missing data: 4

**19. What steps did you take to implement PLM in your facility?**

- |  |  |
|--|--|
| <u>27</u> Organization's mission developed           | <u>24</u> Organization's vision statement developed      |
| <u>7</u> Followed consultant's plan                  | <u>23</u> Organization's strategic plan developed        |
| <u>20</u> PLM education for management               | <u>18</u> PLM education for medical staff                |
| <u>18</u> PLM education for all services             | <u>27</u> Developed PL manager roles & responsibility    |
| <u>31</u> Identified PLs                             | <u>14</u> Decentralized fiscal factors to PLs            |
| <u>20</u> Identified organization's PLM role         | <u>26</u> Identified PL manager's authority              |
| <u>14</u> Developed PL business plans                | <u>13</u> Developed employee PLM communication plan      |
| <u>14</u> Assessed information systems               | <u>17</u> Piloted one or two PLs initially               |
| <u>14</u> Developed PL performance measurement plans | <u>13</u> Implemented or revised information systems     |
| <u>14</u> Collaborated with VISN Director            | <u>10</u> Collaborated with other VAMCs in the VISN      |
| <u>28</u> Selected PL manager(s)                     | <u>13</u> Developed critical pathways (protocols)        |
| <u>19</u> PL's mission developed                     | <u>24</u> Developed PLM organizational chart             |
| <u>27</u> Defined PLM in your facility               | <u>12</u> PL's vision statement developed                |
|  | <u>25</u> Reviewed current literature re: PLM approaches |

**OTHER STEPS IDENTIFIED** (Numbers in parenthesis indicate number VAMCs responding with the answer):

1. Visited community hospitals utilizing PL structures (local & national). (2)
2. Revised the mission, vision, value statements, and the strategic plan. (1)
3. Performance Improvement Teams. (1)
4. Created system to achieve goals of PLM but preserve the benefits of the service. (1)

**20. What problems, if any, did you have in implementing PLM?**

- |  |  |
|--|--|
| <u>2</u> Resistance by top management      | <u>16</u> Resistance by physicians               |
| <u>18</u> Resistance by clinical employees | <u>18</u> Resistance by administrative employees |
| <u>3</u> Cost                              | <u>3</u> Selecting product line managers         |
| <u>18</u> Time-consuming                   | <u>22</u> Reorganizing functional services       |
| <u>18</u> Insufficient information systems | <u>15</u> Defining PLM                           |
| <u>3</u> Patient complaints                | <u>7</u> Selecting PLs                           |



**OTHER IDENTIFIED PROBLEMS:**

1. Accountability! Product line managers did not see themselves responsible for all aspects of new operations.
2. We tried product line, have evaluated, and have found in many cases services actually were worse. We have them corrected.
3. With magnitude of headquarters changes, Medical Center overall management did not feel PL reorganization was a priority.
4. Resistance in assuming financial responsibility for product line.
5. Difficult at small hospital as employees have to do more than one job.

**21. What benefits has your facility realized as a result of PLM?**

- |   |   |
|---|---|
| <u>12</u> Decreased costs                   | <u>12</u> Decreased ALOS                |
| <u>16</u> Decreased bed days                | <u>13</u> Improved quality of care      |
| <u>12</u> Decreased waiting times           | <u>13</u> Increased access to care      |
| <u>15</u> Improved patient satisfaction     | <u>6</u> Improved employee satisfaction |
| <u>19</u> Decreased duplication of services |   |

**OTHER IDENTIFIED BENEFITS** (Numbers in parenthesis indicate number of VAMCs responding with the answer):

1. Too early to tell/evaluate (12)
2. Much of (the above) has occurred but PL had nothing to do with it. (1)
3. Information management, business managers, and parts of MAS were successful. (1)
4. Increased outpatient services. (1)
5. Increased/improved communication. (2)
6. Alignment with VISN. (1)

## APPENDIX K

### RESULTS OF STVHCS KEY MANAGEMENT INTERVIEW

**Instructions:** Responses from management personnel (A through M) to each question are provided in as much detail as possible. Specific titles or names of individuals providing each response are not included in order to protect their anonymity and privacy.

#### 1. How would you envision the PLM organizational structure in our facility?

A. A mental health product line was used as an example to explain the response. The product line should be implemented jointly between the three Texas systems. There would be Network admission criteria and an assessment of the history of patients we treat. Decisions would rest with every Director accountable to the VISN Director.

B. We need to think spherically. Existing product lines overlap one another, implying an integrated continuum of care. Administrative services should be fully matrixed through the product lines.

C. Product line leadership would be based on major services being provided. The leader would either be an administrator or Chief Medical Officer (CMO). The CMO could be an administrative person. The product lines may be as follows:

Long Term Care

Acute Medicine: medicine/surgery (nursing included)

Administrative: Director/Human Resource Management and Fiscal Services

Hospital Services: Acquisition & Material Management, Environmental

Management Service, and Engineering Service

Behavior Sciences

Primary Care/Managed Care

The product line manager(s) would be selected by the Director. They could be a physician, nurse, Chief Medical Officer, or an Administrative Officer.

D. I envision product line management in its infancy philosophically. The organizational approach is more bottom-up, patient driven, and flat line. It eliminates excessive layers of assistant chiefs and chiefs, and gets rid of titles and turfdom.

E. A start to product line management is the matrix structure that transitions to product line management. It should happen for all services involved. Conceptually, it has a product line manager reporting to authority, and the product line team to the manager. In the medical model with ACOSs as product line managers, I see associate chiefs as first line managers.

F. The current product lines that fit are Ambulatory Care, Mental Health, and Primary Care. Extended Care and Rehabilitation need to be two separate product lines, but it is too expensive to have an ACOS for rehabilitation. Administration cannot support it. We have changed the responsibility of the executive position in each product line. The ACOS is the defacto product line coordinator. We need an acute care product line and ACOS. The level of responsibility given to the ACOS is the issue. We need to broaden the administrative officer role for operations.

G. Hands-on services should be managed through product line management, matrixed on top of the traditional organizational structure. It is not an administrative role. It should be organized in primary care, long term care, and acute care product lines, with core administrative support to manage administrative support requirements for the product lines.

H. I could not envision product line management in the STVHCS. Some VAMCs have tried Business Service product lines (Fiscal/A&MM/part of MAS), but it was a problem because they were never able to get someone with expertise in all areas. Administratively, product lines could be:

A&MM, Fiscal, and HRM. Maybe MAS could be included.  
Engineering and Environmental Management Services.  
Prosthetics, Pharmacy, and Food & Nutrition Services are all more clinical.  
Library and Chaplain Services.  
Medical Media and Education Service.

Clinical product lines should be based on Network product lines, but we still need a Deputy of product line management at the local level.

I. Those product lines set up now are artificial. They need to be functional products rather than related. For example, primary care should be with acute care. We need product lines that manage integration from one continuum to the next for the patient. The center of the product line should not be based on physician activities, but on the natural history of the patient. There should be a vertically integrated system of care, such as described in the Long Term Care Task Force report (following the McManis report). Product lines should be education, research, and patient care. I see the triad as consultants to the product lines. We need brainstorming, including the triad, not for decision-making, but for exploring ideas. After that, the product lines can make recommendations for consideration by the triad.

J. We need to start with major care arenas, i.e. Mental Health (Psychiatry, Psychology, Social Work, Substance Abuse); Acute Care; Long Term Care; and Primary Care. Administratively, we need to maintain the specialists from administrative services in each shop under the product line manager. Administrative product lines could be:

A&MM, Fiscal, and Engineering Service.  
HRM, Voluntary, and Payroll.

K. Clinical product lines should follow Headquarters' Strategic Healthcare Groups, except nursing should be encompassed in acute care, primary care/ambulatory care, and geriatrics & extended care. Social workers should be matrixed in product lines. Chaplains should be under acute care, but then branch off to other services. Administratively, we could have the following product lines:

Engineering with EMS.

HRM alone.

Fiscal and A&MM.

MAS, Information Resource Management, and Medical Media.

PL team leaders should do performance appraisals on clerks in the team.

L. I envision a modified matrix team approach. Such an integrative approach would result in increased productivity with decreased numbers of staff.

M. I envision product line management delivering quality care.

## **2. What problems, if any, would you foresee in implementing PLM in our facility?**

A. Selecting product line managers is the biggest problem. The VHA system does not have experts who have both skills in business operations and clinical aspects, which are needed to be a product line manager.

B. There would be chaos and confusion in middle management and providers about who to answer to.

C. Traditional problems any organization faces with change would occur. There would be a paradigm shift from old to new. Empires and traditions would be dismantled. The leader should be organized, be a facilitator, and be able to move toward customer satisfaction, financial success, and optimal use of resources. The leader should be flexible and approachable.

D. Resistance by physicians is the biggest problem. We need physician buy-in. Turfdoms from top to bottom would be another problem because the current organizational structure is very traditional. I do not personally want to see it change. The big problem with such a multidisciplinary organization is who does what and how do we best take care of the patient. Competencies and proficiencies need to be evaluated. I do not like the peer review process. We need someone to review charts.

E. Reorganizing functional services would be the biggest problem. Failure to designate functional responsibilities handled by services would result in further problems.

F. I see several problems.

1. The current ACOSs do not want it and do not have business skills necessary for product line management.
2. How does MAS fit in? Now MAS is universally matrixed. We need more accountability. Where would MAS functions end up?
3. Resistance by physicians.
4. Reorganizing functional services along product lines and maintaining their specific tasks at the same time.

G. I see no problems other than training and orienting staff to track costs in each product line to determine if products are cost efficient and that the number of products meet the demands.

H. Reorganizing functional services and the fact that we have no one with expertise in product line management are the main problems I see in implementing product line management.

I. Now there is no integration of administrative services involved in product lines with a focus on internal customer satisfaction. We need partnerships with administrative services. Product line planning teams need to include administrative staff also. There is no integration or communication of activities between product lines now, such as primary care and Extended Care/Long Term Care. As a result, there is competition between product lines. We are also losing opportunities to create knowledge. We need a research and education focus in each product line to evaluate programs and test new inventions. For example, we could set up a research process involving primary care clinics for acute care and GEM, and evaluate outcomes of each medical model to determine the best model. This would result in improved patient care and improved GME programs.

J. Resistance by top management and insufficient information systems would be the two biggest problems. It would result in loyalties being changed. Existing turfdom, egos, and the current lack of true empowerment of employees would be a problem.

K. Turf would be the biggest problem. What would we do with the other chief when two services are combined? What happens to the other chief's salary and title? Who do you make the "head" person?

L. The biggest problem would be that there is now no integration of functions. We need systematic training, such as unit MDI training. I fear the loss of skills by employees to pass on the expertise in functional areas, such as regulations, legal issues, data validation, MCCR, and fee basis. I fear the loss of comradery among employees and colleagues, and the inconsistent assurance of regulations being followed.

M. Product line management does not result in real outcomes. There is no reward for profit with the government's budget system. We are not able to be cost effective because there is not a system or a stable way for developing a set of physicians to give care (residents, etc).

### **3. What benefits would you hope to realize from PLM?**

A. I can see benefits on the clinical side of the house, i.e. in quality of care. Teams would work together with one mission in mind...integrated delivery systems.

B. It is the logical business way.

C. I would hope to see 3 benefits:

1. Optimum customer satisfaction
2. Financial cost avoidance
3. Optimal utilization of human and material resources

D. The biggest benefit would be breaking down barriers we have put in place.

E. Product line management is supposed to be cost beneficial, but if not, do not do it just for the sake of doing it. I am not sure that it improves the quality of care. If we go to primary care with proactive programs, we should get the bang, but that does not depend on product line management.

F. Team synergism and developing loyalties would be the benefits I would hope to see with product line management.

G. Hopefully, we would see decreased costs.

H. We could reduce operating costs of care by reducing the number of supervisors. However, rather than reducing the number of assistant chiefs, we need to reduce the service chiefs and have assistants report to product line managers. We should not reduce patient care services. We should offer uniform service throughout the system. Fewer chiefs would let you do this. Headquarters should not have chief conferences, but have product line manager conferences.

I. I would hope to see facilitation of the patient across the spectrum of care, decreased clinical redundancy, and reduced administrative costs. If we have education and research product lines, we could create new knowledge and best practices, thus strengthening GME.

J. I would hope to see decreased costs by reducing the number of chiefs and assistant chiefs and by becoming more efficient.

K. I would hope to see better teamwork. Some services now do not respond.

L. I am not against clinical product lines vertically because MAS functions horizontally pulls product lines together.

M. I cannot see the benefits. I cannot yet see the benefits in case management.

**4. What qualifications would you expect of a PL manager applicant?**

A. The product line manager should be a lead clinician who has a Health Systems Specialist to support administrative functions. Clinical knowledge is required of the product line manager.

B. The product line managers should have a master's degree in health care administration. They should have a strong clinical and management background, including finance and economics.

C. We should require the product line managers to have health care and health care administration knowledge. They should be approachable and flexible, and have a vision for ever-changing five year goals. They should be leaders who subscribe to the concept of relativity, i.e., be able to determine if a product or service we are providing is relative to the mission or not. If it is not, there is no need for it.

D. The product line managers should have clinical skills, leadership skills, managerial skills, interpersonal skills, and oral skills. They should be organized and have a vision and philosophy.

E. The product line manager should have a high degree of clinical orientation, excellent management skills, and good interpersonal skills.

F. The product line manager should have:

1. Discipline working knowledge. They need more than theory; they need good sense about the product.

2. Business savvy. The typical clinician's practice now results in increased quality, but decreased efficiency.

G. It would take a rare individual with interpersonal skills, who continually monitors activities, doesn't delegate all of it, and has the confidence of all product line members. We need the right mix of the individual with resources.

H. The product line managers should be open-minded, willing to change, learn, be exposed to different responsibilities, and to realize they need to broaden their scope of learning.

I. I do not envision a product line manager per se, rather an interdisciplinary team with clinical, research, education, and administrative representatives managing the product line. Knowing there has to be one accountable person, however, I think the individual must have health systems understanding, a high degree of clinical knowledge, good fiscal skills, and good interpersonal skills. They have to be a team player. The current setup, i.e. a clinician and an administrative officer responsible for each product line, is a good beginning, but the current administrative officers are generalists and not specialists. A research product line could be led by a Ph.D.; an acute care by a physician; and a mental health product line by a social worker.

J. The product line manager must have a master's degree in health care administration.

K. Clinical product line managers should be physicians. MAS would not know the clinical aspects. Fiscal product line managers should know accounting principles.

L. The product line manager should have expertise, compassion, and commitment. They should be willing to train staff. They would be stronger if clinically based. We need a task force to identify common functions in services, determine how to link common functions, and look at functional relationship and corporatism.

M. They should be a manager for care - for scheduling. I don't know...Who is the PL manager now?

**5. Describe your view of the PL manager's role and responsibility.**

A. The manager is responsible for monitoring operations, clinical programs, and workload.

B. They have global responsibility for product line implementation with excellent delegative skills. They have the authority to take risks, be innovative, and think outside the box. They report to the Network Director. There could also be a product line chief for the Network serving as a consultant.

C. The product line manager has comprehensive budget planning responsibility for the product line, and is responsible for HRM and product line goals. He should report to the CEO.

D. The product line manager should be totally empowered to manage and lead the product line, but there need to be VHA budget regulation changes made first.

E. The product line managers should be kind of like Assistant Chiefs - responsible for day to day operations, coordination for policy and procedure, personnel work (hire/fire), and assuring one standard of care.

F. Product line managers would make efficiency and quality decisions. It is a mental



viewpoint. VA led GME and University Hospital through managed care. We would lead them in product line management. Chiefs of services may have increased clinic management responsibilities, and receive per capita dollars to train residents.

G. The product line manager has authority greater than a service chief to negotiate to bring consensus without violating ethical principles...practices give and take. The final authority on whether we do something or not rests with the product line manager. The individual should be someone with experience and scope of the Chief of Staff or Associate Director.

H. The product line managers have responsibility for guiding, planning, and execution of the product line's mission (including all services included in the product line). They makes changes to increase growth and be efficient, and the set guidelines to reduce costs. They should be responsible to the CEO. We need a CEO and Associate Director at local level if there are not Network product lines. If there are Network product lines, we do not need facility CEOs.

I. The product line manager's role is to create, maintain, and refine a high quality product, which means being a visionary or eliciting ideas from others, developing the ideas into operational product lines, monitoring and evaluating the product line operations, functions, and patient outcomes, and refining the product lines. Refining extends to changing the product line focus or even dropping a product line that is not beneficial to the organization or patient needs. The manager's responsibility is to educate and motivate staff, maintain the fiscal health of the facility, and interpret the clinical product in light of patient needs.

J. The manager should be empowered to make decisions regarding the product line's operations and functions.

K. The product line manager is responsible for anything within the product line services. They are responsible for appraising people properly, and doing some functions within the product line. They communicate the vision to product line members and top management. The Director and COS positions should stay. The Associate Director position could be eliminated. Product line manager should report to the COS and Director.

L. The product line manager should be empowered.

M. (No answer provided)

**6. Do you think the STVHCS should implement PLM? Explain your response.**

A. No. Administratively, there have been problems with product line management in other VAMCs, particularly where MAS has been dismantled. MAS is the keeper of laws, rules, regulations, and statistics. When dismantled, there is too much potential for error that has great impact on the organization. The person selected as manager must have expertise in health care business and in clinical operations. The VA cannot support the salary required of such an

experienced individual. Therefore, the manager selection becomes person specific. If, for example, a product line was developed and the Chief, Engineering Service was made the product line manager, we would not have someone to replace him if he retired. Clinically, product line management could work better. Advantages and cost efficiencies would be realized. It could be developed by centering a team around a group of patients.

B. We (STVHCS) are already doing it to some extent. Not necessarily so in Texas though; Texas is too big to do Network product lines.

C. If the budget continues to decrease, it will happen. We need to establish time lines, implementing one product line every 6 months. We need to establish staff and goals, and review the advice from VISN and Headquarters. The STVHCS could reorganize like the private sector: a CEO with a Vice President for Services and a Vice President for Operations.

D. I am not sure it's the best and wisest thing to do. Are we putting the best people in the slots to go into 2000?

E. It depends upon the design. Does it fit here? Matrix would be a natural fit.

F. We need to increase the responsibilities of ACOSs, with the assistance of an operation's person for each ACOS. DSS must be fully functional to provide cost/profit analyses. Should we dissolve support services? We need to see more experiments.

G. Perhaps we should try one product line. We should set up in a continual plan action meeting.

H. No. It could happen, though, as I described earlier.

I. Yes. I am a proponent of product lines.

J. Yes. I am a proponent of Dr. Kizer's plan. However, product line managers should be fully empowered to manage and lead the product line. I am not sure top management is willing to let this happen.

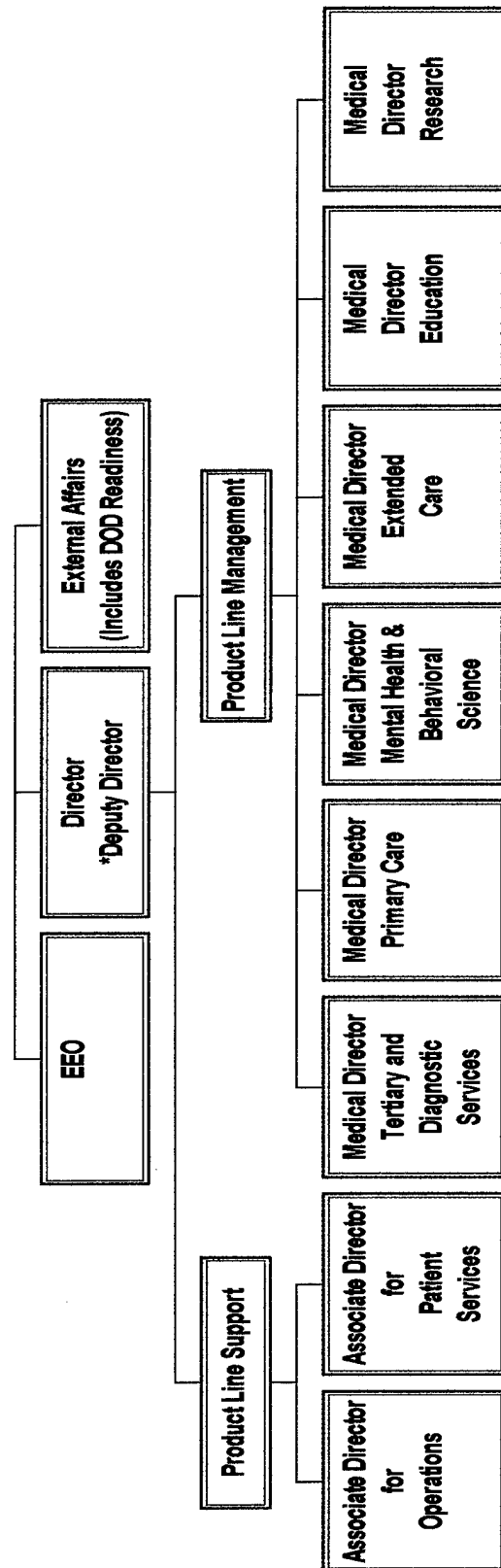
K. Yes. It would result in better coordinated patient care and teamwork.

L. Yes, if it is set up for clinical outcomes. That would be the least traumatic and most successful plan.

M. I do not know my role in the acute care product line. Incentives and motivations are diluted in product line management. It is a team-shared structure.

## APPENDIX L

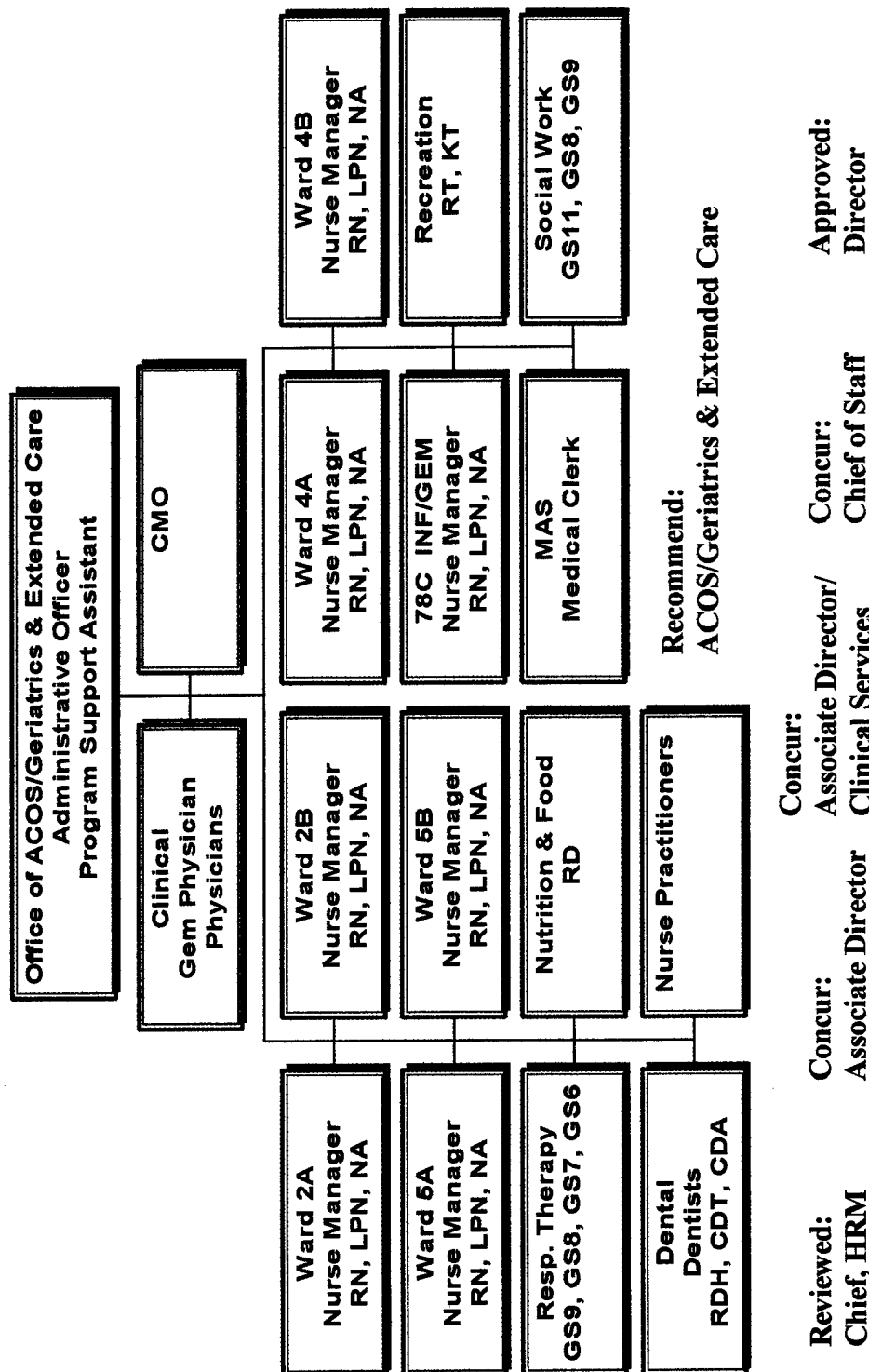
### MASTER CONCEPT ORGANIZATION CHART: VAMC (A)



# APPENDIX M

## ORGANIZATION CHART: VAMC (B)

Geriatrics & Extended Care Performance Improvement Council



## **APPENDIX N**

### **HEART OF TEXAS VETERANS HEALTHCARE NETWORK MISSION GOALS AND STRATEGIC OBJECTIVES**

#### **A. Network Mission Goal: Improve access to care for eligible veterans.**

##### Network Strategic Objectives:

1. Adopt a uniform definition, healthcare delivery model, and enrollment process for primary care.
2. Establish additional community based outpatient clinics (CBOCs) within existing resources to ensure access to care is available within 30 miles or 30 minutes of the veteran's residence.
3. Patients currently enrolled in primary care will wait no more than 7 days for a primary care clinic appointment and no more than 30 days or no worse than current performance if greater than 30 days for other clinic appointments.

#### **B. Network Mission Goal: Maximize operational efficiency.**

##### Network Strategic Objectives:

1. Expand ambulatory surgery and invasive diagnostic procedure capacity within the Network.
2. Decrease bed days of care (BDOC) in the aggregate by transitioning the Network from a hospital bed-based system to an ambulatory care-based system.
3. Establish a Network pharmaceutical formulary, expand consolidated procurement, and standardize administrative and clinical guidelines governing Pharmacy Service operations.
4. Integrate the Bonham and Dallas VA Medical Centers into the North Texas Veterans Healthcare System. (This objective had been met by the time this study was conducted.)
5. Systematically review clinical programs within the Network for potential streamlining, enhanced efficiencies, and cost savings.

6. Systematically review administrative programs within the Network for potential streamlining, enhanced efficiencies, and cost savings.

**C. Network Mission Goal: Promote a culture of ongoing quality improvement.**

Network Strategic Objectives:

1. Develop a Network-wide Utilization Management (UM) program that addresses managed care standards and their application to all dimensions of the healthcare delivery continuum.
2. Expand the application of clinical guidelines from the five nationally developed guidelines.
3. Understand the perceptions and needs of employees, patients, and other external stakeholders and design a Network image building campaign that is informative, relevant, and unifying in its delivery.

**D. Network Mission Goal: Become an employer of choice.**

Network Strategic Objectives:

1. Establish a Network Education Program to promote shared education and training activities for non-supervisory and supervisory employees.
2. Develop an integrated Network-wide Upward Mobility Program with expanded career track opportunities based on inter-facility coordination.
3. Develop a Network Transition Program that is responsive to the needs of employees displaced as a result of Network restructuring and changing nature of healthcare.

**E. Network Mission Goal: Adopt proven technologies that are responsive to patients and other stakeholders.**

Network Strategic Objectives:

1. Establish an integrated Information Resources Management (IRM) Plan for the Network.
2. The Network will systematically assess adopted healthcare technologies to achieve economies of scale, enhance inter-facility compatibility, and promote consistency in the healthcare product delivered to patients.

**F. Network Mission Goal: Develop a diversified funding base through resource alliance initiatives.**

Network Strategic Objectives:

1. Develop a Resource Alliances Plan that establishes cost avoidance programs and additional resource streams to diversify the funding base of the Network.

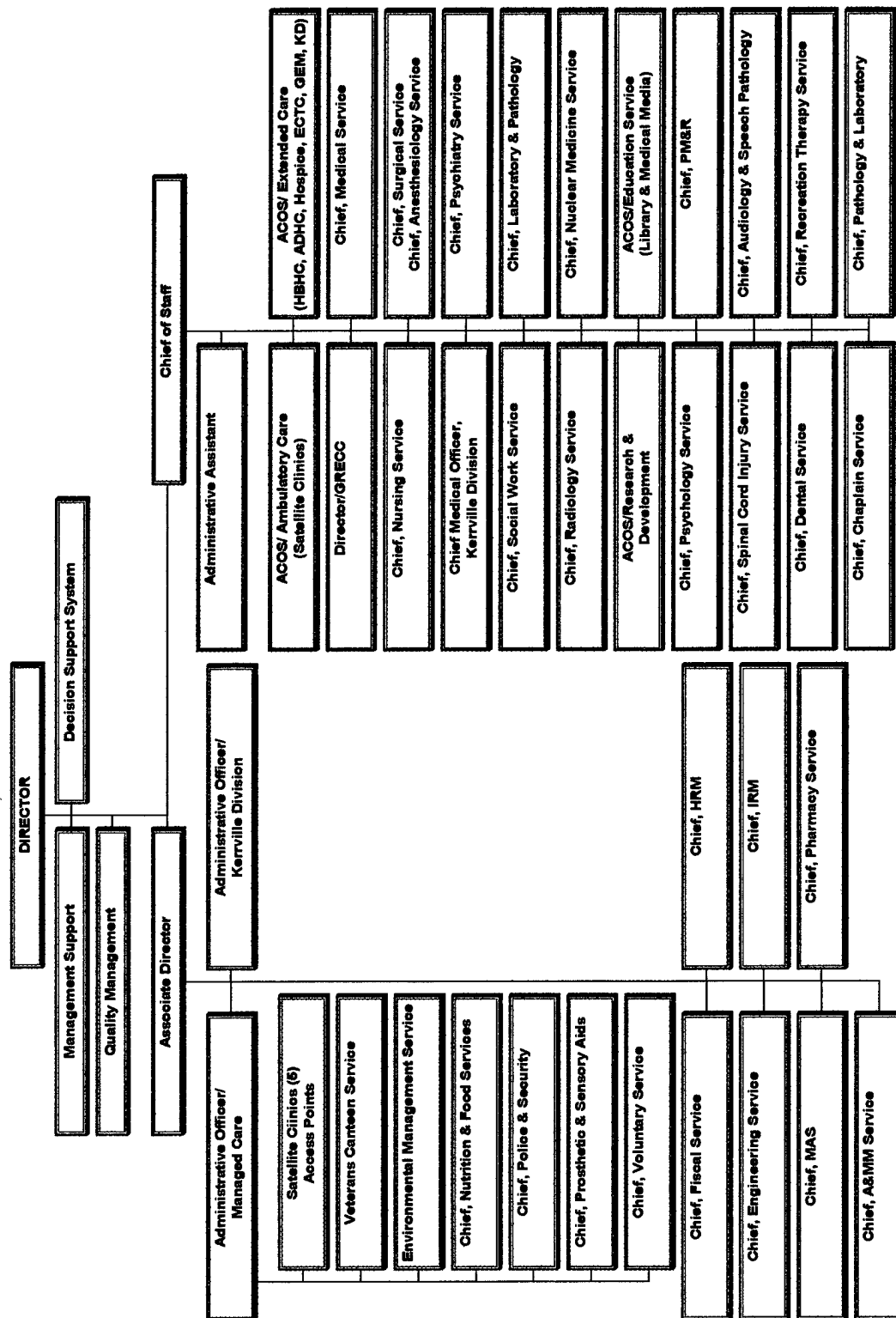
**G. Network Mission Goal: Ensure a viable Network infrastructure that is responsive to the changing healthcare environment.**

Network Strategic Objectives:

1. A process will be developed to ensure Network major, minor, minor miscellaneous, and non-recurring maintenance projects are consistent with the tactical and strategic directions of the Network.
2. A process will be developed to ensure additional/replacement equipment and lease procurements are consistent with the tactical and strategic directions of the Network.

# APPENDIX O

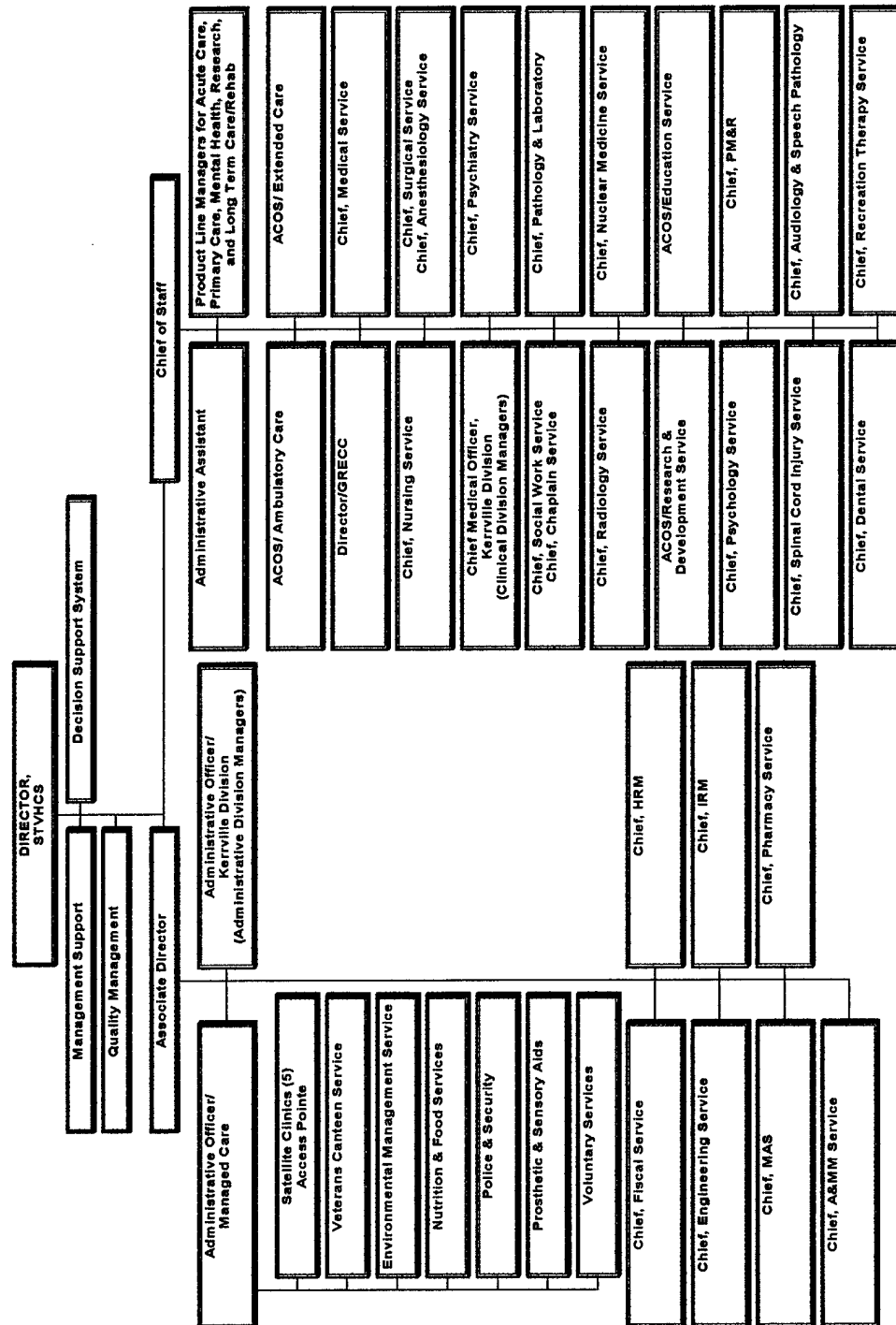
## STVHCS ORGANIZATION CHART





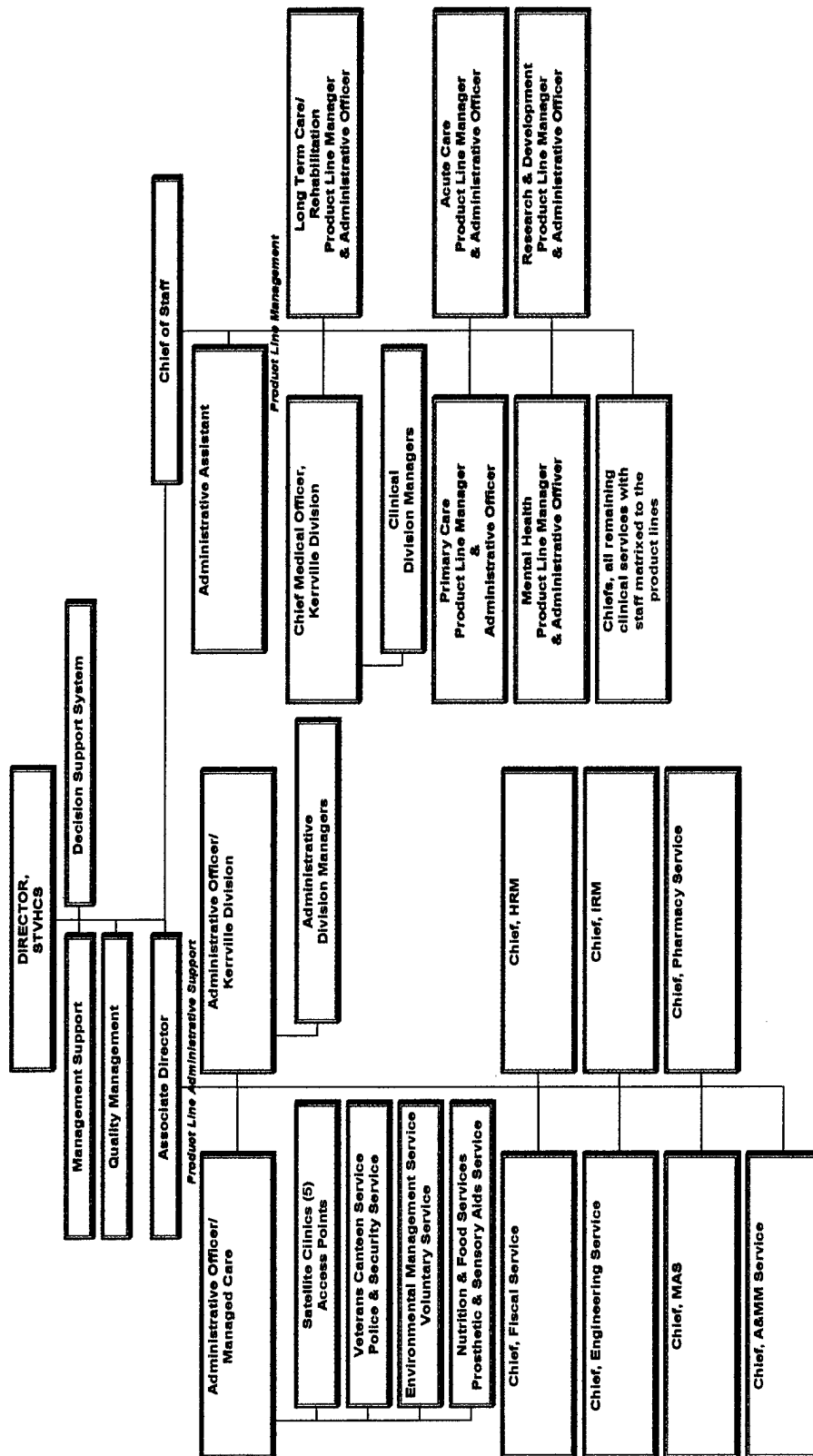
# APPENDIX P

## ORGANIZATION CHART: ALTERNATIVE APPROACH A



# APPENDIX Q (1)

## ORGANIZATION CHART: ALTERNATIVE APPROACH B (1)

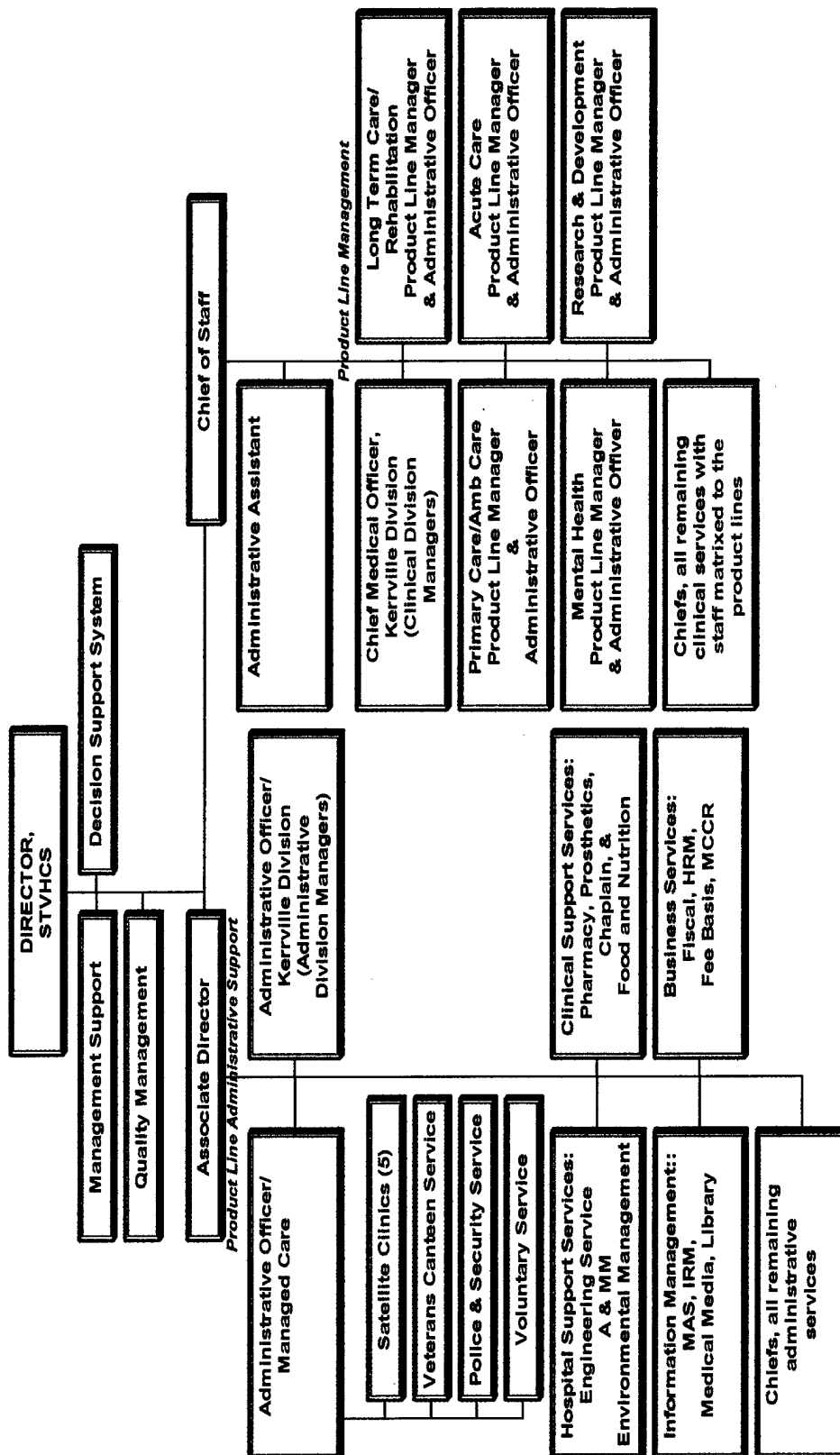


## ORGANIZATION CHART: ALTERNATIVE APPROACH B (2)



## APPENDIX R

### ORGANIZATION CHART: ALTERNATIVE APPROACH C



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